Land Use Copy

DOWNTOWN PLANNING STUDY

Final Report

June 1989

Prepared For:

Ashburnham Planning Board
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Ashburnham, Massachusetts 01430

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This project was funded through a Strategic Planning Grant
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INTRODUCTION

In May 1988, the Town of Ashburnham, Massachusetts, completed a policies and objectives plan for its downtown area.* In order to continue the planning process and to identify specific land use strategies for implementation, the Ashburnham Planning Board in November 1988 retained IEP, Inc., and TAMS Consultants, Inc., to prepare a downtown report, based on the objectives developed in the earlier report. This final report describes a preferred development alternative for the downtown; policy changes necessary to achieve this alternative; and an action plan to implement these policies, including proposed land use regulatory changes, proposals for appropriate use of Town-owned land in the downtown area, and schematic plans for traffic and parking changes.

As noted above, this project has been a team effort involving personnel of IEP, Inc., and TAMS Consultants, Inc. Land-use inventory, analysis and planning was carried out by IEP's Municipal Planning staff; wastewater generation and disposal aspects were undertaken by IEP's Ground Water Resources division; and transportation and circulation analysis and planning were the responsibility of TAMS personnel.

This project was funded through a Strategic Planning Grant awarded by the Massachusetts Executive Office of Communities and Development

* *Directions for the Downtown: Policies and Objectives Plan for Ashburnham's Center,* A Planning Report Prepared by the Ashburnham Downtown Planning Task Force and LandUse, Incorporated, May 1988.

TASK 1 – LAND USE ANALYSIS

This preliminary report is the product of the planning team's research relative to the first two tasks of the Downtown Planning Study, i.e., a land use analysis of the study area, and an analysis of the existing infrastructure with respect to (1) wastewater generation and disposal and (2) transportation and circulation. It summarizes our review of previous reports describing existing conditions in the downtown area, our review of Board of Assessors and Board of Health records, our field studies, and our interviews with Town officials and local businesspersons. This report presents the "baseline" conditions from which the planning project will proceed.

The statements expressed in this section are not conclusions of the planning project, but represent the findings of the initial research phase of the project. The purpose of this task was to define the factors affecting development and change in the study area, and to provide a framework for confirmation and expansion of these issues and opinions by the Planning Board.

1.1 DEFINITION OF THE STUDY AREA

The definition of the Downtown Study Area is based on the delineation prepared for the Phase I study conducted by LandUse, Inc. The study area includes all parcels shown on Assessors Maps 61, 62 and 63, and comprises the area generally bounded by rear lot lines of parcels fronting on Chapel and Mill Streets on the north; Holden and Proctor Streets and Maple Avenue on the east; Fairview Avenue and Central Street on the south; and School Street on the west. The total area of the study area (excluding the areas of public streets) is approximately 274 acres.

The study area includes not only the downtown business area, but also the surrounding areas zoned for residential and industrial use. Of the total area, approximately 23 acres (8.3 per cent) is zoned for business, while over 80 per cent is zoned for residences.*

IEP personnel prepared a base map of the study area at a scale of 1"=200'. The sources of this map were the Town's Assessors maps (using a compiled map prepared by LandUse, Inc., for the policies and objectives plan) and the USGS topographic quadrangle for Ashburnham.

* The zoning district boundary between the I and R-A districts splits four large parcels. These parcels are included in the I district for the purposes of this computation, as are their complete areas.

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STUDY AREA

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0 200 400 800 feet

SCALE 1"=400'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

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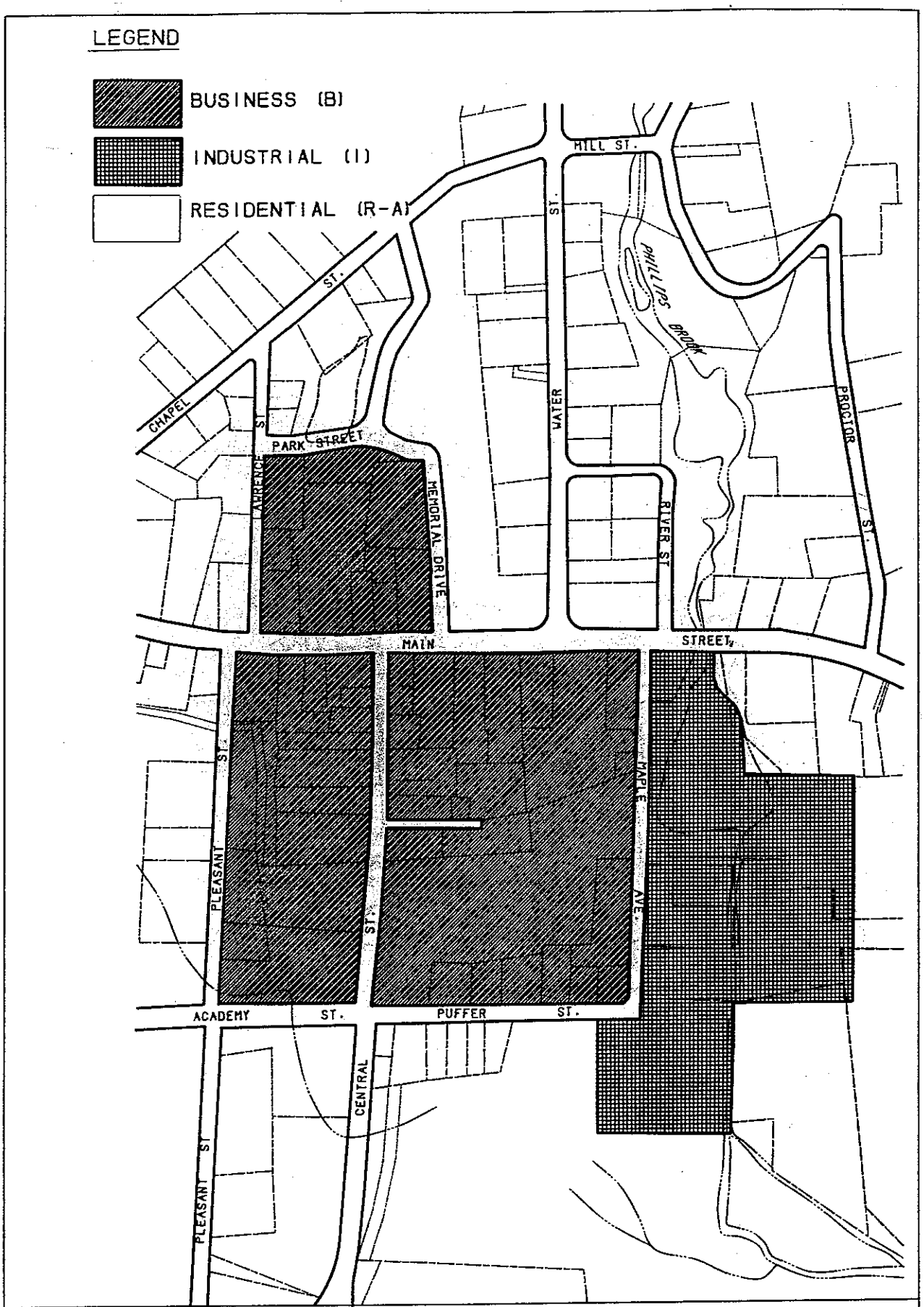

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EXISTING ZONING

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0 100 200 400 Feet

SCALE 1"=333'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

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1.2 LAND USE INVENTORY

Using the Property Assessment Records on file in the office of the Ashburnham Board of Assessors, IEP developed an inventory of land uses, parcel dimensions, ownership and zoning controls in the study area. This information was updated through site surveys, and was used to create a computerized parcel-based database using the Lotus® 1-2-3® spreadsheet software package. The database also includes information from the parking inventory (described in Section 1.3 below) and the septic flow estimates (see Section 2.1.3 below).

The study area includes a total of 242 parcels, of which 153 (63.2% of the total) are occupied by single-family homes, and 16 parcels (6.6% of the total) are occupied by two- and three-family homes. These parcels occupy a total of 115.7 acres, or 42.2 per cent of the study area total. Thus, while the study area comprises one of the traditional centers for commerce and industry in the Town of Ashburnham, it also includes a significant residential component. Commercial uses comprise 7.4 percent of the parcels and 2.9 per cent of the acreage in the study area. Other significant uses include industrial uses, municipal properties, and Cushing Academy.

The distribution of land uses in the study area is summarized in Table 1.

Table 1

Study Area Land Use

	Parcels		Area	
Property Classification	Number	% of Total	Acres	% of Total
Single-family	141	58.3%	95.15	35.4%
Two-family	15	6.2%	9.81	3.6%
Three-family	1	0.4%	2.00	0.7%
Other residential*	26	10.8%	14.92	5.4%
Open and Agricultural	3	1.2%	49.60	18.1%
Commercial	18	7.4%	7.95	2.9%
Mixed Commercial/Residential	12	5.0%	6.70	2.4%
Industrial	4	1.7%	26.33	9.6%
Town of Ashburnham	9	3.7%	20.61	7.5%
Cushing Academy	8	3.3%	36.75	13.4%
Charitable Organizations	2	0.8%	0.33	0.1%
Churches	3	1.2%	2.13	0.8%
Total	242	99.9%	274.28	100.0%

*Includes accessory land with improvements (e.g., garages), multiple houses on one parcel, apartments, and vacant residential land.

1.3 PARKING INVENTORY

TAMS personnel carried out a survey of parking facilities in the downtown area, and prepared an inventory of on-street and off-street parking spaces. For each non-residential property, the number of off-street parking spaces was recorded. If spaces were not clearly delineated in a parking facility, an estimates was made of the number of parking spaces which could feasibly be created in the available area. This information has been incorporated in the computer spreadsheet, as part of the parcel-based database, for use in subsequent tasks.

For residential properties, which generate a smaller demand, it was assumed that off-street parking needs could be met on the same parcel. Therefore, the computer spreadsheet includes the designation "N/A" (for "not applicable") for these parcels.

TASK 2 – INFRASTRUCTURE ANALYSIS

2.1 WASTEWATER

2.1.1 Review of Existing Hydrogeologic Information

The study area is located within the Nashua River Basin and is found on the Ashburnham 7.5 minute quadrangle of the United States Geological Survey (USGS) topographic maps. Phillips Brook drains the study area and continues southeast to join the Nashua River. There are several sources of hydrogeologic information available for the Ashburnham quadrangle including USGS reports, United States Department of Agriculture (USDA) Soil Conservation Service soils maps, and the Department of Environmental Quality Engineering (DEQE) Water Supply Protection Atlas. There was no surficial geologic map available for the Ashburnham quadrangle at the time this report was written.

Hydrologic Atlas 276 (HA-276)
Water Resources of the Nashua and Souhegan River Basins

The water resources of Nashua and Souhegan River Basins are reviewed in the USGS publication titled "Water Resources of the Nashua and Souhegan River Basins, Massachusetts (Hydrologic Atlas 276)". This publication contains maps and graphs detailing ground water availability and quality in unconsolidated aquifers. It also contains information regarding surface water availability and quality. The map of ground water availability describes availability in terms of transmissivity. Transmissivity is a measure of the ability of the materials to transmit water. It generally is given in terms of feet squared per day (ft^2/day). Stratified unconsolidated deposits are split into three transmissivity categories; 0 - 1,350 ft^2/day, 1,350 - 4,000 ft^2/day, and greater than 4,000 ft^2/day. Till is considered to have zero transmissivity. Most of the study area is mapped as having zero transmissivity (till). There is an area south of Main Street that is mapped as having transmissivities of 0 - 1,350 ft^2/day. Transmissivities in that range (0 - 1,350 ft^2/day) are usually associated with deposits of sand and silt.

Soils Map, Town of Ashburnham

The USDA Soil Conservation Service general soil map details the distribution of various soil types in the Town of Ashburnham. The accompanying report titled "Soils and Their Interpretation for Various Land Uses" discusses the different soil types and their suitability for specific land uses. Aerial photographs were used as a base for the mapping. Two levels of soil mapping intensity were employed in making the soil survey of Ashburnham. The soils in the valleys were mapped in units of one named soil and the soils on the hills and ridges were delineated in groups of one or more named soils which are associated. All of the soil types found within the study area were given a severe rating for use for septic tank absorption fields. A severe rating indicates that the soil has one or more properties that are unfavorable for the rated use and usually means that major soil reclamation, special design, or intensive maintenance would be required.

Seven soil types are delineated within the study area. These soils are summarized in Table 2. The presence of slowly permeable hardpan is given in inches below the ground surface.

Table 2

Soil Classifications For Ashburnham

Soil Classification	Drainage	Presence of Hardpan (in.)	Rating for Use for Septic Absorption Fields
Marlow-Peru	moderately to well drained	24-36	severe due to wetness and slow percolation rate
Merrimac Series	excessively drained	none	severe due to poor filtration capability
Marlow Association	well drained	24-36	severe due to wetness, slow percolation rate, and steep slopes
Walpole Series	poorly drained	none	severe due to wetness and poor filtration capability
Lyman-Tunbridge Association	excessively drained	none	severe due to shallow bedrock
Freetown Association	poorly drained	none	severe due to ponding and slow percolation
Ridgebury-Whitman Association	poorly drained	12-24	severe due to wetness and slow percolation

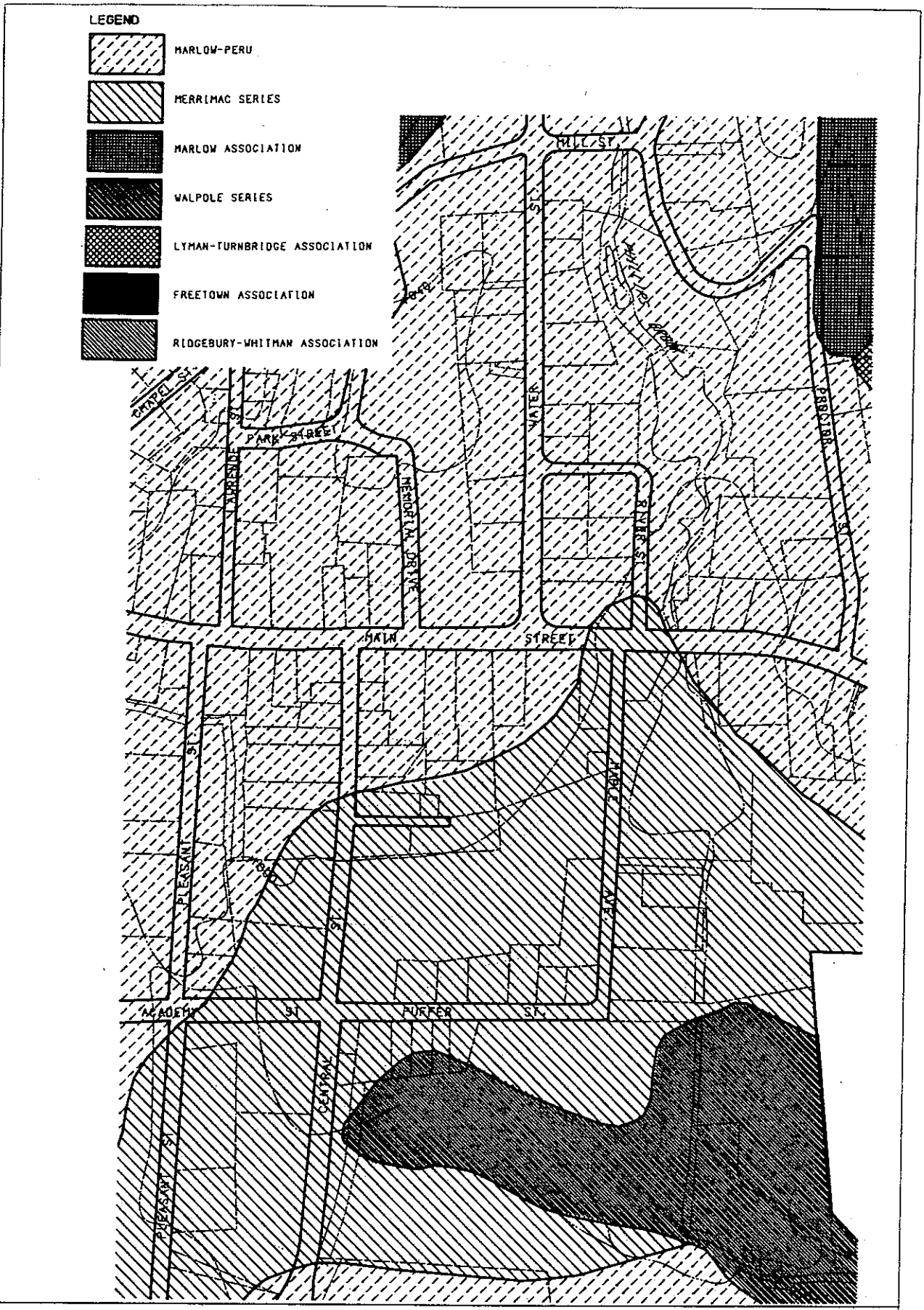
The predominant soil type within the study area is Marlow-Peru Association. This soil type is found along Main Street, the area to the north of Main Street, and to the southwest of the Town center. Merrimac fine sandy loam is found to the south and east of the Town center. Marlow Association soils are found in the southwest corner of the study area. Walpole Series soils occupy a small area to the east of Marlow Association soils in the lowlying areas to the east of Maple and Puffer Streets. The remaining soil types occupy small portions of the study area.

DEQE Water Supply Protection Atlas

The Water Supply Protection Atlas contains overlays for each USGS topographic quadrangle in Massachusetts. These overlays illustrate the location of water supply sources, waste sources, surface water drainage divides, and unconsolidated aquifer favorability (Aquifer Information overlay). The Aquifer Information overlay illustrates the areal extent of the unconsolidated deposits in Ashburnham relative to the favorability of those deposits for water supply. The overlay described most of the study area as zero favorability or till. There was one area southeast of the Town center that had a greater than zero favorability. This is the same area that was pointed out in HA-276 as somewhat favorable.

Septic Suitability of the Soils

Based on existing information, the soils in the study area do not appear to be acceptable for on-site disposal of septic wastes.



ASHBURNHAM DOWNTOWN PLANNING STUDY

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SOILS MAP

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0 100 200 400 feet

SCALE 1"=333'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.
USDA SOILS MAP, ASHBURNHAM.

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2.1.2 History of Septic System Failure

An interview with Larry Murphy, Health Agent for the Nashoba Associated Boards of Health, was conducted by IEP personnel on October 27, 1988. Mr. Murphy has been Health Agent for the past twenty years. The purpose of the interview was to compile a history of septic system failure in the downtown area of Ashburnham. A summary of the information collected during that interview follows.

The downtown area is supplied with water from Upper Naukeag Lake and is on individual septic systems. The rest of Ashburnham is serviced by individual water supplies and septic systems. According to Mr. Murphy, most of the lots in the study area have suffered septic system problems at one time. The north and northwest portion of the study area including the residences along Phillips Brook have had numerous failures. Bedrock is fairly shallow in that area (three (3) to four (4) feet below the surface). The material is silty till. The area near Puffer Street has a high water table which often leads to septic system failure. Many of the businesses along Main Street have had failures over the years. The Collins Nursing Home off Lawrence Street has had three failures over the past 16 years.

In general, the entire downtown area has had problems with septic system failure. These problems are caused by: 1) small lot sizes, 2) poor septic disposal suitability of the soils, 3) steep slopes, and 4) high water table.

2.1.3 Septic Flow Estimates

Septic flows in units of gallons per day (gpd) were estimated for each parcel in the study area. The septic flow estimates were included in the spreadsheet developed for the Town by IEP and TAMS. These estimates were subsequently used to complete the wastewater portion of Task 3 of this study.

The septic flow estimates were based on estimates of septic flow for various land uses per 310 CMR 15.02, Title V of the State Environmental Code, "Minimum Requirements for the Subsurface Disposal of Sanitary Sewage". The land use was determined from the Town of Ashburnham Assessor's Cards. Septic flow from single family residences is based on the number of bedrooms. This number was estimated from the number of rooms listed on the Assessor's Cards. One (1) bedroom was estimated for a one (1) to five (5) room residence. Two (2) bedrooms were estimated for a six (6) to seven (7) room residence. Three (3) bedrooms were estimated for an eight (8) to nine (9) room residence. Four (4) bedrooms were estimated for a ten (10) or greater room residence. Apartment buildings were estimated to contain one (1) to two (2) bedrooms per apartment. The septic flow from Cushing Academy is treated on site and discharged into Phillips Brook. The estimate of that septic flow was based on the total number of students and was not broken up by parcel. Retail store septic flow was estimated using the figure from 310 CMR 15.02 for dry goods stores. The remaining estimates were based strictly on estimates detailed in Title V. Phone calls were made by IEP personnel to some of the businesses and churches in Ashburnham to confirm the land use and gather additional information necessary to complete the septic flow estimates.

2.2 TRANSPORTATION

2.2.1 Introduction

As a result of the population growth in the Town of Ashburnham, activity in the downtown area associated with local retail and business facilities has intensified over recent years. This has resulted in an increase in traffic movement and general activity in the town center.

At the same time, increased growth in through traffic on the primary highway routes through the Town has resulted in greater conflict with the downtown commercial activities. The transportation element of the Downtown Planning Study addresses these issues and conflicts as an integral part of the land-use study.

The main transportation issues, identified as areas of particular concern in the Town, relate to traffic and pedestrian movement, parking, safety and the implications of future land-use changes. During the initial phases of the study, the existing conditions prevailing in the Town have been assessed and documented, in order to establish a basis for the evaluation of improvement proposals and policy changes.

2.2.2 Local Highway Context

Two classified routes form the backbone of the local highway network in the downtown area. Route 12, which is a rural minor arterial linking Fitchburg to Winchendon, bisects the Town in an east-west direction, and it is along this route that the majority of commercial activity takes place, concentrated in the town center along Main Street.

Route 101 passes through the town in a north-south direction from Ashby to Gardner, and crosses Route 12 by way of a short "dog-leg" section on Main Street. The route is comprised of Water Street/Ashby Road to the north of Main Street, and Central Street to the south of Main Street.

The majority of traffic, both seeking access to the downtown facilities and making through movements, utilizes these routes. As a result, the intersections of Main Street with Water Street and Central Street experience high traffic volumes. Main Street in particular experiences the highest traffic flows, and it is here that access to most retail and business facilities is located. The intersections of side streets with Main Street generally exhibit poor standards of layout.

Other important local access streets are:

- Pleasant Street, which forms an alternative link between Main Street and Central Street to the south.
- Memorial Drive, serving the Town Hall, Bank, Post Office, Food Mart, Dolly Whitney Adams building, Police Station, School and Senior Center, linking in turn to Chapel Street and Lawrence Street.
- School Street, which provides primary access to Cushing Academy.
- Maple Avenue, which serves an area of industrial use in the south-east quadrant of the town adjacent to the Town Playing Field.

Two further important Town facilities, the Fire Station and the Highway Depot, are located on Central Street. In the north-east quadrant of the downtown, Proctor Street/Mill Street and River Styx Road provide access to residential areas. Puffer Street and Academy Street both join Central Street

south of the town center, the former being mainly residential in function, and the latter also serving Cushing Academy.

Generally, the downtown area is subject to a 30 miles per hour (mph) speed restriction, although north of Main Street the limit is increased to 35 mph on Water Street. Main Street itself is characterized by numerous curb-cuts to adjacent development, and there is some on-street parking along its central portion.

Throughout the remainder of the downtown area there is no designated on-street parking, but a number of retail and business premises provide some off-street parking spaces. The most substantial of these is the area serving the Bank, the Post Office and the Food Mart, accessed by an entry from Main Street.

2.2.3 Route 12 Traffic Study

During 1986, the Montachusett Regional Planning Commission (MRPC) undertook a "corridor" study of Route 12 to investigate possible remedial measures to deal with highway problems. Since part of the Route 12 corridor includes the area of most concentrated traffic activity for the Downtown Study, much of this previous work is relevant to the current investigations. Indeed, the report provides a useful source of data, and its findings have therefore been assessed in some detail.

The results of that study are documented in the MRPC report dated February 1987, which should ideally be considered in association with the current study. Where relevant, reference will be made to the report contents, but at this juncture it is useful to briefly summarize the pertinent findings and recommendations made at that time.

The MRPC study found that:

(i) The vast majority of Ashburnham residents travel within the Fitchburg–Leominster Standard Metropolitan Statistical Area (SMSA), but only some 30% of workers residing in Ashburnham actually work in Ashburnham. This has significant implications for travel patterns.

(ii) Traffic on Route 12 exhibits highly directional flow during weekday peak periods, suggesting significant work-trip attraction to the concentration of employment locations in and around Fitchburg.

(iii) Traffic volumes on Route 12 decrease as it passes westward through the town center, indicating that many trips are made into the Town without continuing along Route 12.

(iv) The overall accident rate for Route 12 is lower than the Statewide average for such a roadway. However, the rate for Main Street itself is much higher (167%) than the statewide average for a rural primary roadway, albeit that the route is not strictly rural in nature in this area.

(v) Significant accident records prevail at the intersections of Main Street with Water Street (Route 101 North), Central Street (Route 101 South), Pleasant Street/Lawrence Street and School Street.

(vi) At the Main Street/Water Street intersection, a good Level of Service (LOS) is achieved for all traffic movements, with little delay or queuing. However, vehicle speeds contribute to the poor accident record.

(vii) At the Main Street/Central Street intersection, satisfactory LOS are again achieved, with only small delays for the critical left-turn movement from Central Street. However, limited sight distances appear to be a major factor in accident occurrence, and there are significant geometric deficiencies.

(viii) On-street parking interferes with the safe operation of the three main town center intersections on Route 12, that is, at Water Street, Central Street and Pleasant Street.

(ix) A poor accident record exists at the School Street intersection with Route 12, on the fringe of the downtown area.

In light of their findings, the MRPC made a series of specific recommendations for the improvement of intersections along Route 12. These included the elimination of some on-street parking, the provision of curbing, the upgrading of roadway signing and the installation of new signs. It was also recommended that a parking ticket system should be established to properly enforce parking bans.

In addition, guidance on transportation program funding was reviewed in the report, and a sample municipal traffic code was provided.

2.2.4 Traffic Data

Specific traffic volume surveys were undertaken in 1986 for the MRPC study, and these provide a useful base traffic network for further consideration and analysis of conditions. More recent surveys have not been carried out by either the MRPC or the Massachusetts Department of Public Works (MDPW), but field observations have been undertaken as part of this study, to monitor any significant changes in traffic patterns.

Analysis of historical data indicates that traffic growth on Route 12 has increased in recent years, ranging from less than 1% per year in 1980/81 to some 7% per year between 1983 and 1986. A lesser rate of some 6% per year was experienced on Route 101 during the period from 1983 to 1986. It is likely that growth on other local streets has been much less significant, due to their predominantly local access function.

It is worth noting that, during the period 1980-1985, average population growth in Ashburnham was approximately 1.2% per year. As this is a lesser rate than traffic growth, it suggests both an increase in general automobile usage and a possible increase in through traffic movement in the Town.

In the absence of more recent surveys, it is useful to update the 1986 traffic data by the application of growth factors, to develop 1989 base year data for this study. The MRPC was consulted regarding growth trends, and it was concluded that background growth rate would be appropriate to update traffic volumes, in light of the fact that no significant new developments have taken place in the local area which would result in a non-uniform growth pattern.

The current general growth rate for rural roads used by the MRPC is 4% per year. On this basis, the Annual Average Daily Traffic (AADT) flows on Routes 12 and 101 for the 1989 base year are as follows:

	1986 (MRPC Study)	1989 Base Year
Route 12 (West of Route 101)	5,000	5,620
Route 12 (East of Route 101)	5,150	5,790
Route 12 (Westminster Town Line)	4,400	4,950
Route 101 (North of Route 12)	2,400	2,700
Route 101 (South of Route 12)	2,800	3,150

With the exception of the Water Street and Central Street intersections, turning traffic on Main Street was not considered by the MRPC study to be critical in terms of traffic capacity. Recent observations confirm that side street traffic is still relatively low in volume, and traffic capacity is not considered to be an issue. However, there are obviously other significant problems at some of these locations, which will be discussed at a later stage.

Peak hour turning movement counts were undertaken by MRPC at Water Street and Central Street, and Level of Service (LOS) analysis was carried out in accordance with the 1985 Highway Capacity Manual procedures. As previously indicated, satisfactory capacity for traffic movements was found at both locations. In order to evaluate the present conditions, the peak hour traffic volumes were projected to the 1989 base year by application of the relevant growth factor (4% annually), and the capacity analysis has been carried out again for the current study.

The 1985 Highway Capacity Manual defines the Level of Service criteria for unsignalized intersections as follows:

Reserve Capacity (Pas.Car per Hr.)	Level of Service	Expected Delay to Minor Street Traffic
over 400	A	Little or no delay
300-399	B	Short traffic delays
200-299	C	Average traffic delays
100-199	D	Long traffic delays
0-99	E	Very long traffic delays
*	F	*

*When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improvement to the intersection.

"Reserve capacity" is the unused capacity of the lane in question, expressed in passenger cars per hour.

The results for the critical PM peak hour show the following Levels of Service for the turning movements at each intersection for the 1989 base year:

	Res. Cap. (PCPH)	LOS	Ave. Delay (Seconds)	Ave. Q (Cars)
Main St./Water St.:				
Left-turn from Main St. to Water St.	721	A	.99	0.09
Left-turn from Water St. to Main St.	341	B	10.55	0.18
Right-turn from Main St. to Water St.	609	A	5.91	0.02
Main St./Central St:				
Left-turn from Main St. to Central St.	788	A	4.57	0.22
Left-turn from Main St. to Parking Lot	818	A	4.40	0.03
All turns from Central St. to Main St.	254	C	4.19	0.85

It is clear from the results of the analysis that there is adequate traffic capacity at both of the busiest intersections in the downtown area. There is only a slight worsening of the results for 1986, and average delays and queue lengths are still low, falling well within acceptable levels of service. There are, however, other practical and safety difficulties associated with these and other intersections, which are addressed later by this study.

The projected peak hour turning movements and capacity analysis work-sheets will be included as a technical appendix to the final report of the study.

2.2.5 Identification of Problems

Specific transportation difficulties for the downtown area have been identified through the review of previous study work, discussion with Town officials and business people, and field observations on different days of the week and at different times of day. Many of the existing problems are inter-related, and these are summarized in the following paragraphs under the general headings of Intersections, Traffic Circulation, Pedestrians and Parking.

(i) Intersections

As already discussed, it is the roadway intersections along Main Street in the downtown area where difficulties prevail at present. Elsewhere on the local roadway network, existing conditions are such that current intersection operation is generally satisfactory, although the implications of future land-use scenarios will need to be monitored during later stages of the study to ensure that no adverse impacts arise at locations remote from Main Street.

Although none of the Main Street intersections exhibits ideal geometric standards, a number fulfill only limited local access functions, and do not therefore present any significant difficulty. The following locations on Main Street experience problems under existing conditions which warrant the investigation of improvement or mitigation measures:

- At Water Street, sight distances for traffic entering Main Street are often obscured by vehicles parked to the west on the northern side of Main Street. This safety problem is compounded by the poor standard of roadway signing, and the lack of proper definition of the traffic island incorporated in the intersection. Vehicle speeds appear to be the main contributor to the occurrence of accidents.

- Memorial Drive provides a one-way exit to Main Street from the area to the north of the Town Hall, and also collects traffic exiting from the parking lot serving the Bank, Post Office and Food Mart. It is therefore an important street, but the sight distances for traffic entering Main Street are often restricted by on-street on its northern side.

- At Central Street, the busiest intersection in the downtown area, sight distances are again restricted for traffic emerging from Central Street. To the east, there is no on-street parking on the south side of Main Street, but vehicles waiting on the gas station forecourt often restrict visibility in that direction. To the west, the on-street parking on the south side of Main Street frequently blocks sight lines.

  This situation creates a safety problem, not only for turning traffic, but also for pedestrians crossing Main Street to the west of the intersection, where the visibility of pedestrians on the crossing zone is also impaired by parked vehicles. Limited sight distances would appear to be a major factor in the occurrence of accidents.

  The operation of the intersection is complicated by the presence of the gas station on the south-east corner. The boundary of this facility is badly defined, with no real curb provision, a situation which prevails extensively elsewhere along Main Street. Accordingly, movements into and out of

the gas station take place in all directions, to and from both Central Street and Main Street. As this is a busy facility, the associated traffic activity significantly complicates the operation of the intersection.

A further complication at the intersection is the presence of the entry to the main parking lot on the north side of Main Street, slightly off-set to the east of Central Street. As a result, a significant number of cross movements take place, and there are often left-turning vehicles waiting on Main Street, which interfere with other turning movements. The geometry of the intersection is also such that it does not provide for large vehicles to turn in or out of Central Street without encroaching upon other traffic lanes.

- At Lawrence Street, although side street traffic is relatively limited, on-street parking on the north side of Main Street again interferes with sight distances to the east of the intersection.

- The problem of poorly defined curbing again prevails in front of the pharmacy/liquor/food stores at the corner of Pleasant Street, resulting in un-regulated movement of traffic on and off Main Street in proximity to the intersection. Although there is no designated on-street parking at this location, customers visiting the retail facilities often park on the south side of Main Street, and this can impair visibility from Pleasant Street to the east.

- Although strictly it is not wholly within the downtown area, the intersection of School Street with Main Street, and its relationship with Cushing Street, is worth noting as a difficult location. Here the combination of steep gradient, the alignment of Route 12, restricted sight distances and poor signing all contribute to a bad accident record and an obvious safety problem for traffic associated with Cushing Academy.

(ii) Traffic Circulation

A number of locations in the town center present difficulties for the proper circulation of vehicular traffic, both on and off-street, as follows:

- The most obvious problems occur in and around the main parking lot serving the Bank, Post Office and Food Mart, where heavy activity takes place. The situation is complicated by the proximity of the entrance to the Main Street/Central Street intersection, and the conflicts already described between local access and through traffic.

  A drive-through service window for the Bank is located a short distance from the entry point, and queuing frequently occurs to this facility. The late afternoon period on Thursdays, and Saturday mornings, appear to be the busiest times of operation, when it is not uncommon for the queue to tail back onto Main Street, exceeding the storage capacity of 3-4 vehicles. Not only does this conflict with the safe operation of the sidewalk across the entry, but it also results in stationary queues of traffic on Main Street, with obvious impact on other through and turning traffic.

  With the exception of the parking spaces associated with the Post Office and the Bank, the parking lot is poorly marked, so that there is no clear definition of parking spaces and circulation roadways. The route through the lot is extensively used by traffic seeking access to the upper area served by Memorial Drive, as it is a more attractive alternative to the more circuitous one-way route in front of the Town Hall. As a result, there is a clear conflict between parking lot activity and through traffic.

- Traffic circulation on Memorial Drive itself does not create any serious difficulty, in light of the relatively low traffic flows and reasonable roadway widths. It is worth noting, however, that illegal parking frequently takes place at various locations, namely around the Town Hall, adjacent

to the Post Office, and on the upper section in the vicinity of the Dolly Whitney Adams building and the Veterans Memorial building (Police Station/School/Senior Center).

- One particular Town facility which experiences difficulties is the Fire Station, located on the east side of Central Street close to Main Street. The operation of fire trucks is particularly affected by the poor operation of the Main Street/Central Street intersection already described, and the location is therefore not ideal in terms of its ability to easily serve all parts of the Town. Space in front of the station is also limited, making it difficult for fire trucks to maneuver in and out safely and easily. It is understood that these conditions are contributory factors in the proposal to relocate this facility.

(iii) Pedestrians

It should be stressed that all of the foregoing problems are relevant to pedestrian activity to a greater or lesser extent, since the efficient operation of the roadway network for vehicular traffic has a direct impact upon pedestrian activity and safety. There are, in addition, a number of specific difficulties which have been identified for pedestrians.

- The effect of on-street parking on the safe operation of intersections has already been reviewed, and at Central Street in particular there is a problem with the obscuring of the pedestrian crossing zone by parked vehicles. Although it is difficult to define specific locations, the very presence of on-street parking at any location can create a hazard for pedestrians to some degree.

- Generally there is continuous sidewalk provision along at least one side of Main Street, and indeed sidewalks exist on both sides throughout most of the section containing the main commercial facilities. The effectiveness, however, is somewhat reduced at certain locations where there is frequent interruption by curb-cuts, in particular at the gas station and in front of the pharmacy/liquor/food stores at Pleasant Street.

  At these and other locations, the absence of proper curbing also reduces the protection afforded to pedestrians.

- Sidewalk links along certain side streets are also important, and there are a number of breaks in continuity on both Pleasant Street and Central Street. It is also noted that there is no defined footway through the main parking lot, or to the Town Hall, the Dolly Whitney Adams building and the Police Station/School/Senior Center. These links are important facilities which should ideally be planned in association with such facilities for any future changes in land-use.

(iv) Parking

The impact of on-street parking on traffic and pedestrian operation has already been identified, and it is clear that the heavy use of these spaces reflects the desire of users to park conveniently close to the retail or business activities. A number of related difficulties are experienced in this respect.

- As previously discussed, illegal parking takes place on Memorial Drive in and around the Town Hall, adjacent to the Post Office, and in the upper area in front of the Dolly Whitney Adams building. This suggests a lack of proper and adequate designated parking, conveniently located to those facilities.

- Although the restaurant within the building on the south-west corner of the Main Street/Central Street intersection is not currently operational, it is understood that adequate parking facilities do not exist off-street. This is again a situation where well related parking is not provided, with consequent pressure on other alternative parking facilities.

- The overall level of parking supply within the downtown area appears to be just sufficient to cater for normal peak demand. It is worth noting, however, that there is no significant surplus, and, as well as the need to provide properly located parking, it will be necessary to ensure that sufficient new facilities are provided along with new or changed land-use.

2.2.6 Previous Improvement Proposals

As a result of the Route 12 Study in 1986, the MRPC recommended a series of improvements to deal with the difficulties identified within the corridor at that time. It is likely that many of these proposals will be relevant to the current study of the Downtown area, and accordingly they have been reviewed to assess their merit in this context. The proposals are described in detail in the MRPC report, but the evaluation of relevant schemes is described briefly in the following paragraphs.

(i) Main Street/Water Street Intersection

Recommendations included the elimination of parking in front of the old library, the installation of reflective signs on the traffic island, the upgrading of the Stop signs and the installation of Stop lines. These measures would clearly assist the intersection by improving visibility and safety, in particular with the elimination of parking.

(ii) Main Street/Memorial Drive Exit

The recommendation to eliminate parking on either side of this intersection also has obvious benefits in terms of improving sight distances and safety.

(iii) Main Street/Central Street Intersection

The suggested improvements at this intersection included the elimination of parking on the south side of Main Street, with the recommendation that a parking ticket system be implemented to properly enforce parking bans. Again, this would significantly improve safety at the intersection, but its success would be dependent upon the effectiveness of parking control.

The installation of curbing along the south-east corner at the gas station was also recommended, in order to channelize traffic and provide protection for the Stop sign, which would also be upgraded, along with the provision of an Intersection Control Warning Beacon. These measures would be of benefit, although the curbing at the gas station, whilst having merit in the regulation of traffic movements, would have to be so designed that it did not make particular maneuvers more difficult, in light of the overall "tight" geometry of the intersection.

On the north side of the intersection, it was proposed that parking should be eliminated on the east side of the parking lot entry, and in the immediate area within the lot itself. This would relieve the area where queuing to the Bank takes place, and would allow for the provision of an entry storage lane for vehicles approaching from the east. It would not, however, relieve any queuing of vehicles approaching from the west.

(iv) Main Street/Pleasant Street Intersection

Similar recommendations to the Central Street intersection were made at this location, that is, the elimination of parking on Main Street and the installation of curbing at the southeast corner. These measures would also be beneficial at this intersection, although again with the proviso that the curbing should not make maneuvers more difficult and therefore mitigate the benefit of the regulation of movement.

The installation of Stop signs on both Pleasant Street and Lawrence Street is an additional recommendation made in the study which would assist the safety of the intersection, particularly in light of its accident record.

(v) Route 12/School Street/Cushing Street

Extensive recommendations were made for this intersection on the fringe of the Downtown area. These included the installation of Keep Right signs and reflective signs on the traffic island, the provision of Stop signs and advance warning signs on both School Street and Cushing Street, the installation of Cross Road warning signs and a Slippery When Wet sign on Route 12, and the provision of chevron alignment signs on the eastbound approach of Route 12. In addition, it was recommended that, on Route 12 to the west, a regulatory Reduced Speed Ahead sign and upgraded advance warning signs should be installed.

Since the poor accident record and difficulties with this intersection are associated with its sub-standard geometry, visibility and vertical alignment, such improvements would be useful, in the absence of potential for any real physical improvements.

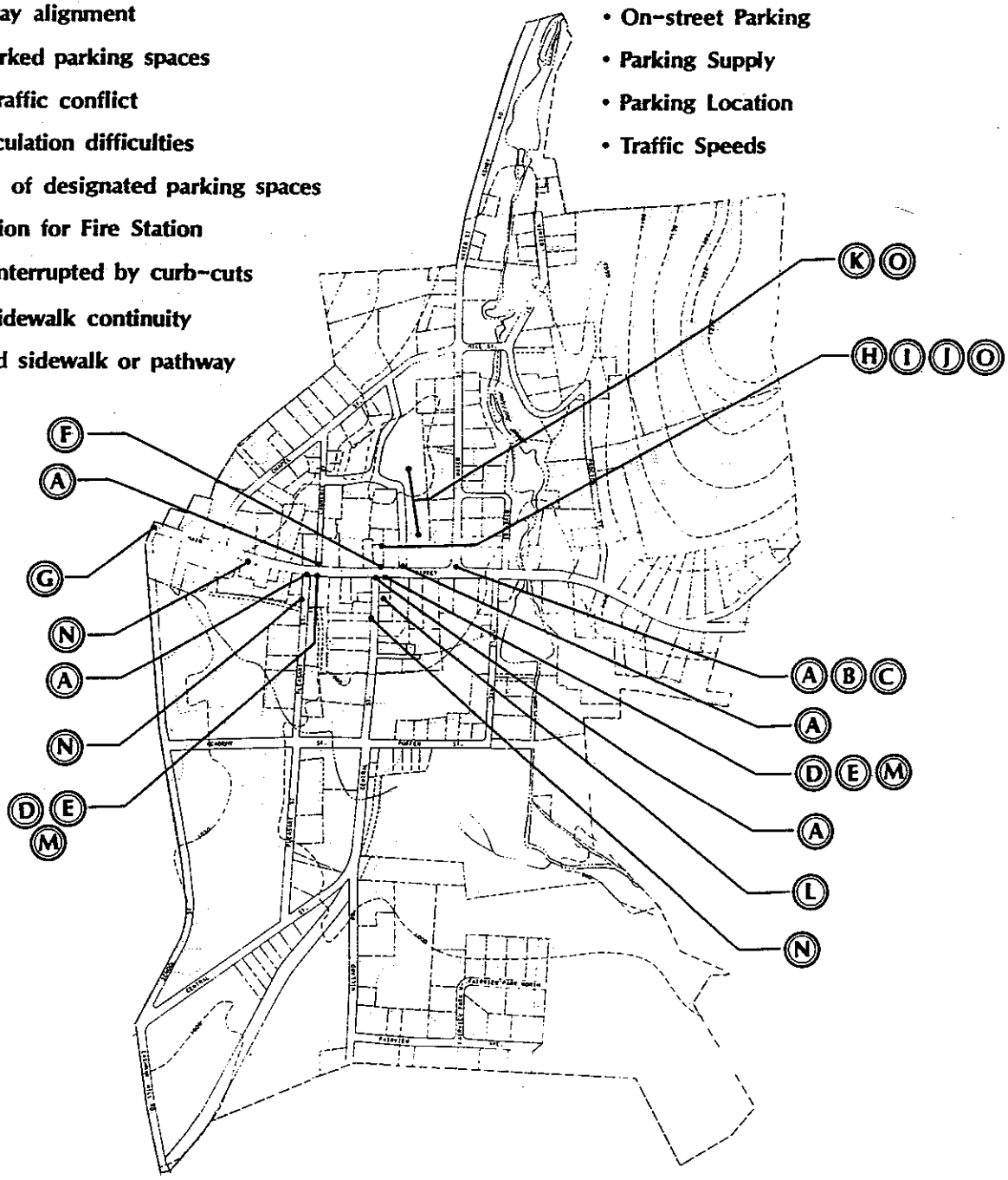
A number of beneficial improvements have therefore been identified from the previous study. In the next phase of the study, these proposals were evaluated and their effectiveness in the context of future land-use scenarios was assessed, along with other measures which were investigated as part of the current study.

KEY TO PROBLEM LOCATIONS

- (A) Sight distances obstructed by on-street parking
- (B) Poor definition of traffic islands
- (C) Sub-standard or lack of roadway signing
- (D) Badly defined curb-cuts
- (E) Un-regulated traffic movement on and off roadway
- (F) Queuing
- (G) Bad roadway alignment
- (H) Poorly marked parking spaces
- (I) Through traffic conflict
- (J) Traffic circulation difficulties
- (K) Deficiency of designated parking spaces
- (L) Poor location for Fire Station
- (M) Sidewalk interrupted by curb-cuts
- (N) Break in sidewalk continuity
- (O) No defined sidewalk or pathway

ISSUES

- Through Traffic Conflict
- Intersection Safety
- Intersection Traffic Operation
- Pedestrian Safety
- Pedestrian Sidewalk/Pathway Provision
- Parking Lot Circulation/Conflict
- On-street Parking
- Parking Supply
- Parking Location
- Traffic Speeds



ASHBURNHAM DOWNTOWN PLANNING STUDY
1989

SCALE 1"=200'

TRANSPORTATION ISSUES AND PROBLEM LOCATIONS

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

SOURCE: ASHBURNHAM ASSESSORS MAPS

IEP
TAMS

TASK 3 – BUILD-OUT ANALYSIS AND DEVELOPMENT ALTERNATIVES

3.1 INTRODUCTION

This section summarizes the work carried out by IEP and TAMS under Task 3 of the Ashburnham Downtown Planning Study. In Task 3, IEP carried out a build-out analysis for the downtown study area under the area's existing zoning and under two alternative regulatory scenarios. The impacts of these build-out projections in terms of ground water quality (i.e., septic flows), parking requirements, and traffic generation were estimated by IEP's Ground Water Supply division and TAMS' transportation planning staff, and compared to existing levels. These projections and estimates were presented to a public workshop, following which the Planning Board selected a preferred development alternative for the downtown area.

This report is accompanied by three sets of spreadsheets, incorporating the build-out projections and traffic, parking and ground water impact estimates of development under existing zoning and two alternative development scenarios. In addition, the products of Task 3 include a series of study area maps at a scale of 1 inch equals 200 feet, showing (1) existing land uses, (2) soils groups, (3) existing zoning, (4) development potential (potential increase in building area) under existing zoning, (5) the "Village" zoning alternative, and (6) the "Expanded Village" zoning alternative. Reduced copies of these maps are included at the end of the report; and maps of the "core" area of the downtown study area are included with the text.

3.2 BUILD-OUT ANALYSIS

The location and amount of development which can occur in the downtown study area is determined through the Town of Ashburnham's land use regulations. A build-out analysis is performed to identify the amount of growth that is "programmed" by current zoning bylaws and subdivision rules and regulations. The assumption for planning purposes is that the Town will "build out" in accordance with its existing growth regulations. A build-out analysis differs from a projection of actual growth in that it is based on land use regulation alone: no market factors are incorporated, and no time line is established for when the build-out will occur.

Thus, the results of a build-out analysis are best interpreted as the ultimate amount of development that the Town permits, rather than the amount of development that is likely to occur within a definite time period. In strong development markets, build-out may be achieved in a relatively short period; but in a weaker market, build-out may never be reached. In such a situation, the build-out analysis may be used to identify areas where zoning by-laws should be changed to channel growth more effectively, in order to avoid the adverse impacts of low-density commercial "sprawl".

Using the parcel-based database developed in Task 2 of the Downtown Planning Study project, IEP estimated the amount of development that is currently "programmed" for the study area by the Town's Zoning By-Laws. This analysis estimates the amount of additional non-residential square footage and additional residential lots which the Town may have to serve when it reaches maximum build-out.

3.2.1 Methodology

Two sets of information were used in the analysis:

- Zoning requirements for the Business (B) and Residence (R-A) district, including minimum lot area, lot frontage, and front, side and rear yards; and maximum lot coverage and building

height. In addition, for nonresidential uses the required ratio of off-street parking spaces was incorporated, using an average area per parking space of 325 square feet (residential uses were assumed to be capable of accomodating the required number of spaces on the lot at the density permitted by zoning).

- Parcel data, including lot area, frontage on public ways, existing zoning, and current land use. The existing building size (gross floor area) was included for all structures, and for residential structures the existing number of dwelling units and bedrooms were included.

The analysis was performed separately for parcels zoned for residential use and for business use.[1] For parcels in the Business district, the build-out analysis assumed that existing residential properties would be converted to commercial use, and that additional building space would be developed to the limits established under the By-Laws' dimensional and parking regulations. The maximum building area per lot was calculated as follows:

- The area of the lot available for structures and off-street parking was computed by deducting the required front, side and rear yard (setback) areas from the total lot area. For this purpose it was assumed that the lot was rectangular; therefore, the depth of the lot was calculated as the lot area divided by the lot frontage, and the total setback area was computed as four overlapping rectangles.

- The maximum total floor area which could be developed on the remaining area was computed using the lot coverage, building height and off-street parking requirements of the Zoning By-Laws.

- The potential amount of additional nonresidential square footage which could be built on each lot was calculated as the difference between (a) the total amount of allowable building square footage allowed under zoning, and (b) the actual existing amount of building square footage on the lot. It was assumed that current residential uses would be completely converted to nonresidential use at buildout.

For residentially-zoned land, the analysis computed the number of parcels which could be created by subdivision or through the "approval not required" process (MGL c. 41 § 81P). Developable residential lots included developed lots which contained enough additional land area to meet zoning requirements for further division. The projected number of additional dwelling units was the difference between the total potential number of lots and the existing number of developed lots: i.e., vacant lots were not deducted from the total number of potential lots, and only one residential unit was deducted from the total for lots with more than one existing dwelling unit (e.g., two-family houses).

Lots which did not meet zoning requirements for minimum street frontage or lot area were assumed to be undevelopable. However, existing structures on nonconforming lots, or existing structures at a nonconforming density on conforming lots, were assumed to remain. If such structures were not at their highest use under existing zoning, it was assumed that conversion to such use would be permitted at the existing floor area. Finally, vacant nonconforming residential lots which met the statutory minimum requirements for area and frontage (5,000 square feet and 50 feet, respectively) were assumed to permit the development of one single-family house (MGL c. 40A § 6).

[1]Parcels belonging to Cushing Academy were excluded from the build-out analysis. The school disposes of its sewage through a package treatment plant which discharges directly to Phillips Brook; therefore, additional development of its property will not impact on ground water in the study area. Sufficient parking can be provided on-site, and is distant enough from the business district so as not to affect it. Additional traffic generation is expected to be minimal.

The build-out analysis represents an approximation of the amount of future development that can occur under existing regulations. The analysis has several limitations which should be recognized in evaluating its results:

1. For residential subdivisions, the analysis assumes that only 15 per cent of the parcel area is lost to roads and to irregular parcel configurations or other site constraints: that is, 85 per cent of the total parcel area is assumed to be convertible to separate parcels at the minimum lot area for the zoning district.

2. The analysis does not take into account any severe physical constraints which may exist on individual parcels: e.g., steep slopes, ledge, wetlands, etc.

3. No estimate was made of development constraints imposed by septic limitations: that is, all lots were assumed to meet Title V standards (310 CMR 10.00).

4. Parcels which were divided by zoning district boundary lines were treated as if entirely within the more permissive zoning district.

Because any of the above assumptions could be violated for individual parcels, the total number of residential lots or nonresidential square feet of floor area predicted by the build-out model is likely to be higher than the amount of development which is practically feasible in the study area. Nevertheless, the model offers a fair approximation of ultimate development potential without preparing individualized development programs for each lot.

3.2.2 Results

The build-out analysis projected a total of 229 residential lots, representing a 22.5 per cent increase from the current level of 187 residential lots.

The analysis also predicted a total of 643,000 square feet of nonresidential building area, which is nearly four times the existing level of 162,000 square feet. It should be noted, however, that more than half of this projected increase (263,000 out of 481,000 square feet) is projected for one large lot which is only partially in the Industrial district and which, in addition, has significant development constraints (wetlands); therefore, the ultimate build-out level is likely to be somewhat less than projected by the model.

3.2.3 Build-Out Impacts

Using the build-out projections for each parcel in the study area, the planning team estimated the impacts of development in the areas of septic flows, parking demand and traffic generation. For purposes of these estimates, new residential development was estimated to have an average of one bedroom per unit; and new nonresidential floor area was assumed to be a mixture of retail and office uses on Main Street, with primarily office uses in the remainder of the Business district.

3.2.3.1 Wastewater

Septic flows were estimated in the same manner as for existing development, i.e., based on Title V standards. It is projected that, at build-out, septic flows will increase 172 per cent, from an existing level of 34,681 gallons per day (gpd) to approximately 94,502 gpd.[2]

[2]Both estimates exclude the sewage flows from Cushing Academy. As noted earlier, these are treated in Cushing's treatment plant and discharged to Phillips Brook, and therefore do not impact on ground water or septic system capacities in the study area.

In order to simulate the impact of septic discharge due to residential and nonresidential development on ground water quality in the study area, IEP ground water staff completed nitrate loading calculations for the downtown area. Nitrate-nitrogen is modeled because of its conservative nature: nitrate-nitrogen is attenuated only in the zone of aeration beneath a septic system; and once the septic effluent reaches the ground water table nitrate is not chemically altered or removed to any significant degree. The nitrate loading calculations consider the total area, the amount of discharge from precipitation occuring over the area, and the estimated septic flows.

The nitrate concentration was estimated at present development as well as at total build-out under existing zoning (and, later, under the development alternatives). The estimated nitrate concentrations assume that the ground water system has reached equilibrium with the nitrate concentration in the septic effluent. Nitrate concentrations were determined separately for the areas of the study area characterized by till and stratified drift soil groupings.

Under current development conditions, the nitrate concentrations in the ground water are estimated to be 16.37 milligrams per liter (mg/l) in the till areas and 6.50 mg/l in the stratified drift areas. In comparison, the U.S. Environmental Protection Agency (EPA) has set a "maximum contaminant level" (MCL) of nitrate-nitrogen for ground water of 10 mg/l. Thus, the downtown's ground water is already significantly overburdened by discharges from existing septic systems. Build-out under existing zoning would cause nitrate levels to increase to 24.76 mg/l in till areas and 17.86 mg/l in stratified drift areas, bringing the entire downtown area well above the EPA maximum contaminant level.

3.2.3.2 Parking

Using multipliers based on data published by the Institute of Transportation Engineers (*Parking Generation* and *Trip Generation*), TAMS estimated the additional parking demand and traffic generation resulting from the future development predicted by the build-out analysis. Parking demand was estimated for the predicted new nonresidential development. As in the case of existing residential development, it was assumed that all parking demand created by residential development will be accomodated on the parcel.

A total demand for 1,089 new parking spaces was estimated, representing a 212 per cent increase from the existing total of approximately 513 parking spaces in the downtown commercial area.

3.2.3.3 Traffic

Traffic generation, expressed in terms of average weekday (AWD) trips, was estimated for projected new residential and nonresidential development. It is estimated that 8,572 new weekday trips would be generated by the combined new development.

This new traffic appears significant when compared to existing traffic levels of about 5,700 trips per day along Main Street in the center of the downtown. It is important to note, however, that new trips generated by individual developments cannot be converted directly to traffic projections along study area roadways. Each "trip" is in fact one end of a one-way trip, and as a result many trips will be counted twice: for example, a trip from a new residence to a new commercial use in the study area would be counted as two "trips", and a trip originating outside the downtown with stops at two new downtown businesses would be counted as four "trips" (i.e., one arriving at and one leaving each of the two stops). Consequently, the most appropriate use of the trip projections is in comparing the impacts of alternative development scenarios, rather than comparing potential new development with existing development.

3.3 DEVELOPMENT ALTERNATIVES

IEP developed two development strategies for the downtown area, to be considered as alternatives to the current land use plan defined by the Town's existing zoning regulations. Both alternative strategies were based on the introduction of two new zoning districts into the Zoning By-Laws: a "Village" (V) district replacing the Business district; and a "Commercial-Industrial" (C-I) district replacing the Industrial district. These new districts were proposed because of the recognition that the dimensional regulations of the existing zoning district were not appropriate for maintaining the existing historical development patterns of the commercial center: for example, 40 of the 48 parcels in the existing Business district (83 per cent) and 5 of the 8 lots in the Industrial district (62 per cent) are nonconforming on the basis of lot area and frontage alone.[3] Additional nonconformities based on lot coverage and yard requirements probably exist, but were not documented.

The dimensional requirements of the existing and proposed zoning districts are as follows:

Zoning District	Minimum Lot Area (Sq. Ft.)	Minimum Frontage (Ft.)	Minimum Yards Front (Ft.)	Minimum Yards Side/Rear (Ft.)	Maximum Bldg. Height (Stories/Ft.)	Maximum Lot Coverage
Business (B)	25,000	125	20	10	3.0 / 40	40%
Village (V)	10,000	50	20	10	2.5 / 30	50%
Industrial (I)	60,000	150	40	25	3.0 / 40	30%
Commercial – Industrial (C-I)	25,000	125	20	10	3.0 / 40	40%

The standards of the proposed Village district are more in keeping with the historic character of the Town center, where lots are smaller and narrower than is common in modern development patterns. This is evidenced by the fact that only 35 per cent of the lots in the existing Business district would be out of compliance with the Village district's area and frontage requirements – a 58 per cent reduction in nonconforming lots. Thus, the proposed regulations will tend to encourage development that reinforces the character of the downtown, rather than encouraging development on a larger scale which could easily erode this character.

Similarly, the reduced area and frontage requirements of the proposed Commercial-Industrial district are designed to reflect more closely the denser pattern of industrial development in this older section of the Town, as compared with modern industrial parks. In addition, changes in the use regulations of this district are envisioned, in order to prevent serious land use conflicts with the abutting Village commercial district.

3.3.1 "Village" Zoning

Under the first development alternative, the existing Business-zoned area, as well as three lots currently in the Industrial district, would be rezoned to the Village district. The remaining lots in the Industrial district would be rezoned to the Commercial-Industrial district. No zoning changes would be made to residentially-zoned parcels under this scenario.

[3]In addition, more than 90 per cent of the residential lots in the study area are nonconforming on the basis of area and/or frontage; however, we did not propose reduced requirements because we do not feel that the existing requirements affect the character of the downtown area adversely, and because we feel that increased residential density poses more of a problem with respect to septic disposal than does office and retail development in the confined downtown area.

3.3.1.1 Build-Out Projections

The build-out analysis of this development alternative projects a potential for a total of 721,000 sq. ft. of nonresidential floor area, representing a 12.24 per cent increase from the buildout level under existing zoning and a 345 per cent increase from the existing level of development. This increase may be traced to two principal factors. First, as noted above, the revised dimensional regulations result in fewer nonconforming lots; consequently, additional development is permitted on more lots than under current zoning. Second, the proposed Village district allows a marginally higher intensity of development, since the increased lot coverage requirement slightly overcompensates for the reduced building height maximum (i.e., 2.5 stories x 50% coverage is about 4% greater than 3 stories x 40% coverage).

No change in the number of residential lots is projected under this scenario, since no zoning changes are proposed for the residentially-zoned portions of the study area.

3.3.1.2 Build-Out Impacts

Wastewater: Under the Village zoning alternative, it is projected that septic flows will increase 144 per cent, from an existing level of 34,681 gallons per day (gpd) to approximately 84,520 gpd at build-out. Nitrate levels would increase to 24.44 mg/l in till areas and 14.67 mg/l in stratified drift areas, slightly below the levels predicted under existing zoning but still well above the EPA maximum contaminant level.

Parking Demand: A demand for 1,190 additional spaces is projected under the Village zoning alternative. This represents an increase of 101 spaces (9.3 per cent) over the number of spaces that would be required at build-out under the existing zoning regulations. This increase reflects the additional nonresidential development that would be permitted as a result of lowered lot area and frontage requirements.

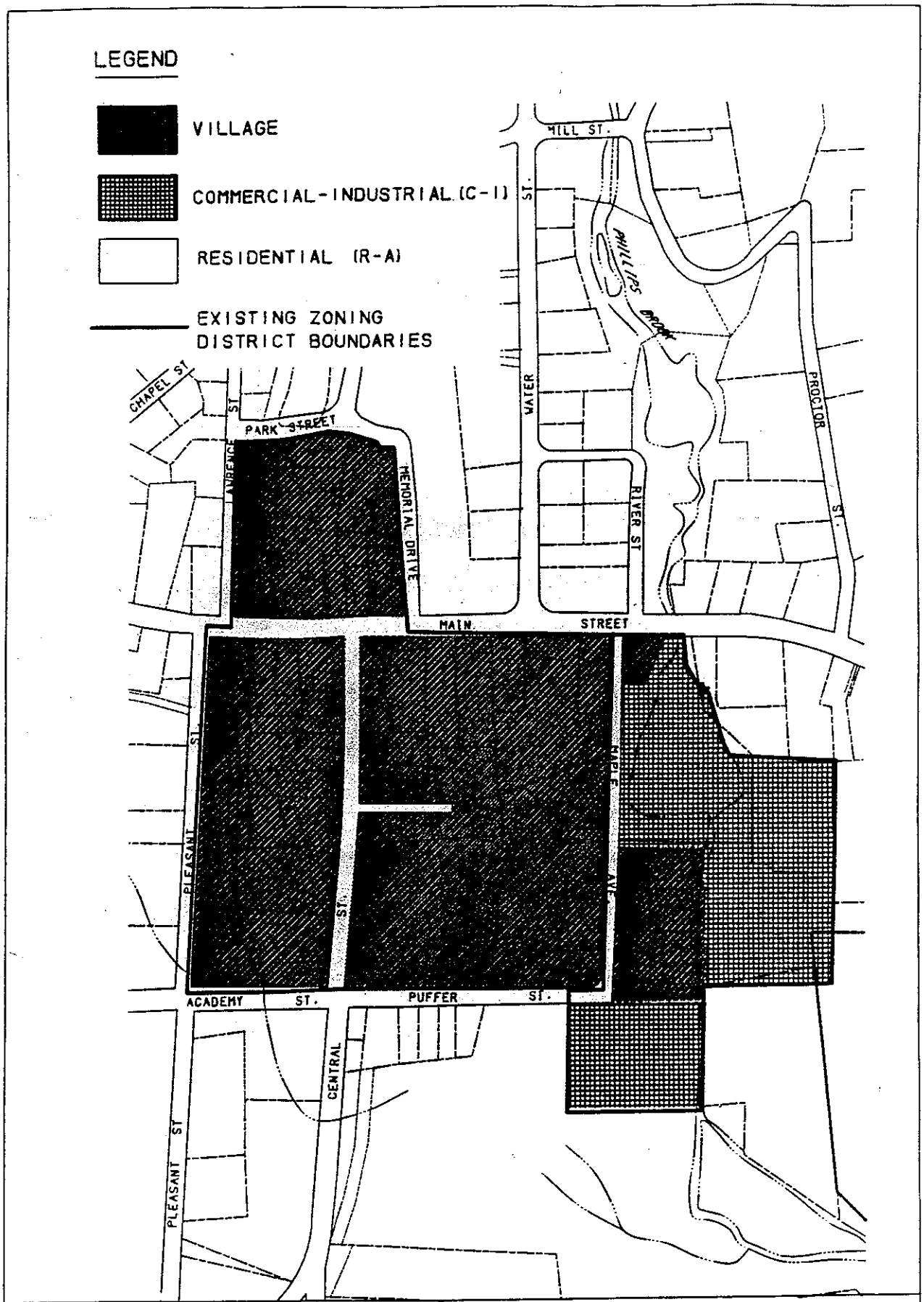
Traffic Generation: The analysis of traffic generation predicts that 9,209 new trips will be generated at build-out under the Village zoning alternative, representing a 7.4 per cent increase over the level of traffic generated at existing zoning build-out.

3.3.2 Expanded "Village" Zoning

Under the second development scenario, the proposed Village zoning district was expanded beyond the boundaries of the existing Business and Industrial districts. This expansion originated from discussions with the Planning Board and the Ashburnham Business Council, and was based on three criteria. First, we attempted to establish clear physical boundaries between zoning districts. These included natural features, such as Phillips Brook; and large parcels of land in common ownership, particularly the Cushing Academy property. In addition, a boundary between the Village and residential districts was created on Main Street at the existing churches, where these institutional uses could serve as transitions between the commercial and residential areas.

Second, members of the Business Council expressed a strong concern that opposite sides of streets should be zoned consistently: that is, that residentially-zoned properties should not exist directly across a street from parcels zoned for business. Specific areas where zoning lines were redrawn in response to this concern included the southerly side of Puffer Street and the westerly sides of Pleasant and Lawrence Streets.

Third, traffic safety along Main Street was taken into account as a limiting factor in the location of business activities. Specifically, it was determined that poor sight distances and steep driveways along Main Street to the east of Phillips Brook made this area unsuitable for rezoning from Residential to Village zoning.



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

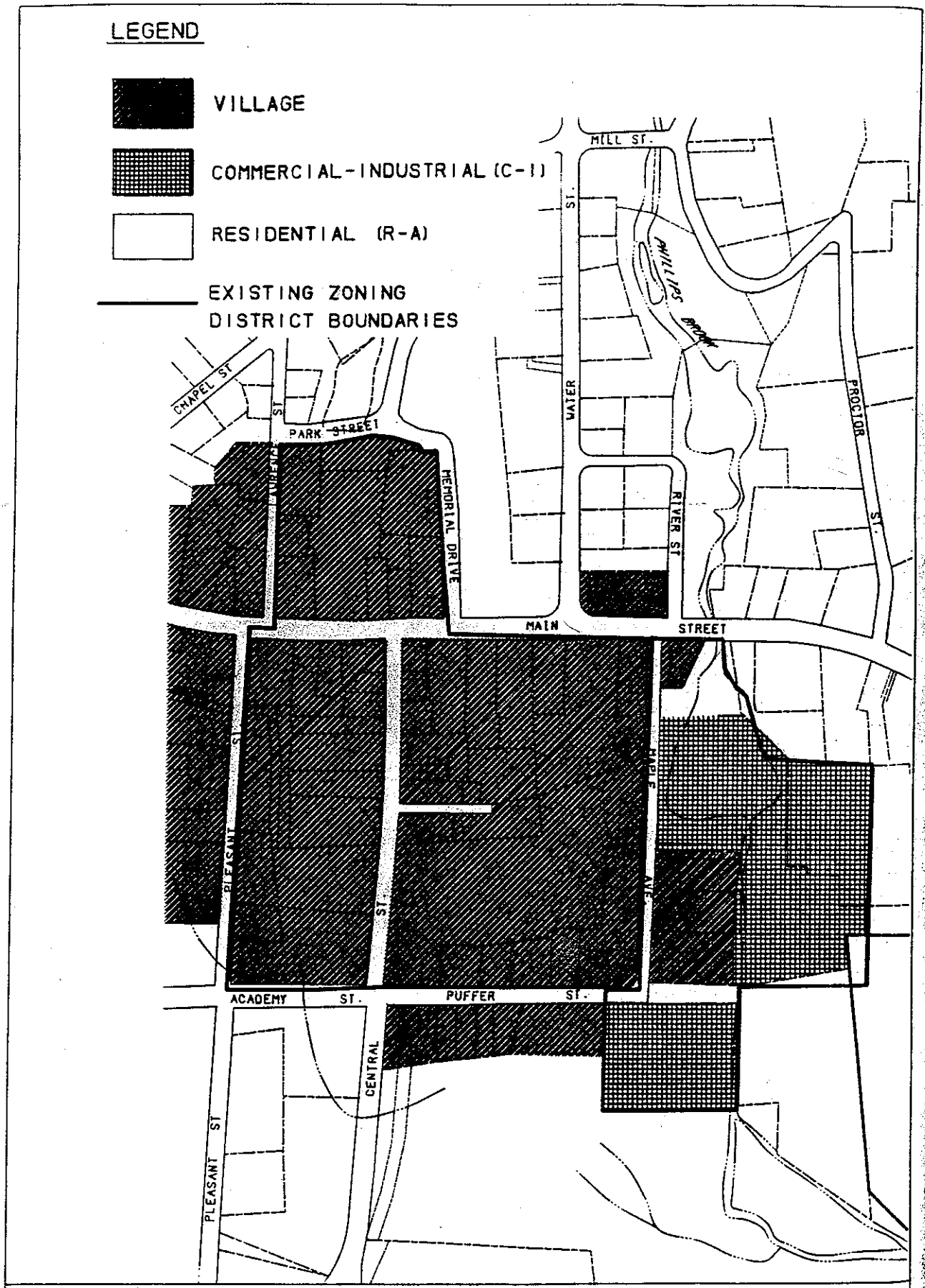
"VILLAGE" ZONING

SCALE 1"=333'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

IEP, TAMS



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

EXPANDED "VILLAGE" ZONING

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SCALE 1"=333'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

TAMS

3.3.2.1 Build-Out Projections

Under this development scenario, the amount of nonresidential space would increase to 899,000 square feet at build-out, an increase of 40 per cent from the level projected under existing zoning, and 25 per cent higher than under the first Village zoning scenario. At the same time, because of the proposed rezoning of residential areas to Village district, the number of projected residential lots would decline to 211. This projected residential development level is 8 lots lower than under the other two build-out scenarios, but is still 24 lots (12.8 per cent) more than the present number of residential lots.

3.3.2.2 Build-Out Impacts

Wastewater: Under the expanded Village zoning alternative, it is projected that septic flows will increase 222 per cent, from an existing level of 34,681 gallons per day (gpd) to approximately 111,683 gpd at build-out. Nitrate loadings would increase to 25.16 mg/l in till areas and 14.70 mg/l in stratified drift areas: these levels are slightly below the levels predicted under Village zoning.

Parking Demand: A demand for 1,710 additional spaces is projected under the expanded Village zoning alternative. This represents an increase of 621 spaces (57.0 per cent) over the number of spaces that would be required at build-out under the existing zoning regulations, and an increase of 520 spaces (43.7 per cent) over the number of spaces that would be required at build-out under the Village zoning alternative with no expansion into the residentially-zoned portion of the study area. This increase reflects the additional nonresidential development that would be permitted by expansion of the Village district to the south side of Puffer Street and to the west of Lawrence and Pleasant Streets.

Traffic Generation: The analysis of traffic generation predicts that 15,016 new trips will be generated at build-out under the expanded Village zoning alternative, representing a 75.2 per cent increase over the level of traffic generated at existing zoning build-out, and a 63.1 per cent increase over the projected level under Village zoning with no expansion into residential areas.

3.4 PREFERRED DEVELOPMENT PATTERN

Following the public workshop at which the build-out analysis and alternative development scenarios were presented, the Ashburnham Planning Board selected as its preferred development strategy a variant of the "Expanded Village" alternative. The concept of the proposed Village district was endorsed, as was the proposed expansion of the district to the southerly side of Puffer Street. However, the expansion of commercial zoning in a westerly direction was not supported by the Board.

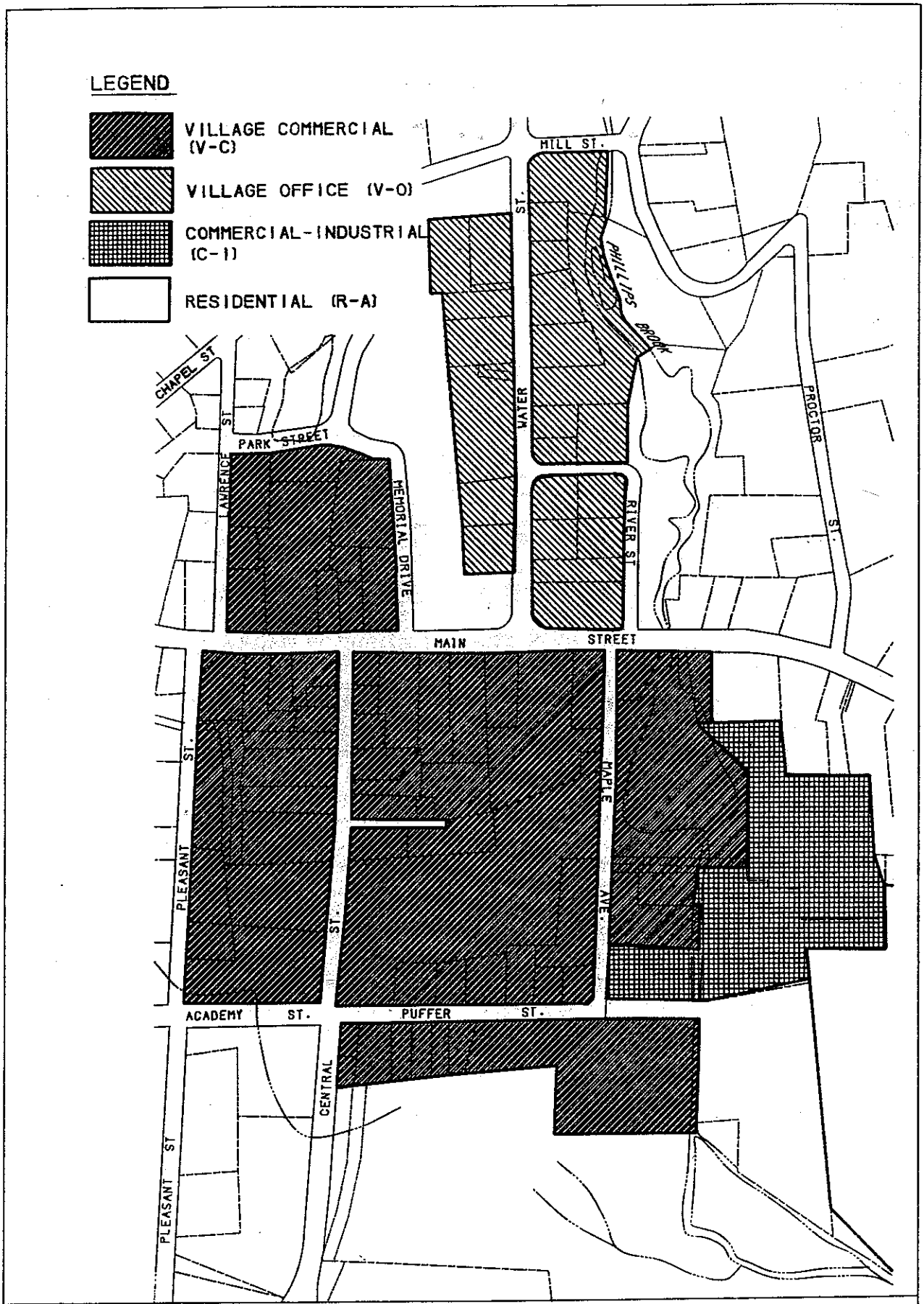
Instead, the Board recommended an expansion to the northeast, up Water Street (Route 101) to the intersection of Chapel Street and Mill Street. The zoning regulations for this area would be more restrictive than for the Village district, permitting only the conversion of older residential structures to office use (provided that all off-street parking demands could be met in the rear of the lot), and not new construction of commercial structures.

The preferred development pattern is based around two municipal activity centers within the downtown area. To the north side of Main Street, the Winchester Park area provides the major nucleus of municipal services, including the Town Hall and the Stevens Memorial Library (Dolly Whitney Adams Building). The expected conversion of the former library building to municipal and/or school office uses, together with the planned improvements to the central "common" area of Winchester Park, will further define this area as the "civic center" of the community. Encouragement of new office uses along Water Street, without permitting new construction that would detract from the area's character, will reinforce the development of this civic center identity for the northerly portion of the downtown.

To the south of Main Street, the second activity center will be defined through the appropriate reuse of the site of the existing Highway Department garage. With the relocation of the Highway Department to another site outside the downtown area, the 4.2-acre parcel will become available for new uses within a few years. Because of past railroad and highway department uses, there are reported to be serious concerns regarding soil conditions on this site, potentially limiting its feasibility for commercial or office uses. In addition, the Planning Board has expressed its strong opposition to the idea of selling the land for private development. Given these considerations, and the site's central location within the existing Business (and proposed Village) district, the relocation of the Highway Department presents a significant opportunity for the Town to provide needed public parking. The challenge for the Town is to develop the site's potential to serve as a new focal point for the downtown, including not simply parking spaces but other public amenities as well.

A high priority for the Town is to provide sufficient off-street parking to support commercial expansion in the downtown area. The Highway Department site is well located to serve this function: not only can it provide parking in proximity to the smaller lots along Central Street, but it would support the development of new commercial activity along Puffer Street. Finally, development of a public parking area on this site could facilitate the development of rear access to the commercial properties on the southerly side of Main Street.

Just as the City and Town Commons plan envisions the creation of a new Town Common in the Winchester Park area, the image of the Highway Department site can be created around the concept of a "Town Plaza". The Plaza would serve as the new focus of Ashburnham's downtown business center in the same way that the Common will serve as the focus for the downtown civic center. Building on the existing pattern of development and municipal ownership, and linked together by a network of pedestrian pathways, these two centers will establish a structure for the future growth of the downtown. By emphasizing the two municipal nodes, this structure will guide growth around the two central blocks of the downtown area, and provide a north-south orientation which deliberately avoids the spread of commercial sprawl outward along Route 12.



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

PREFERRED DEVELOPMENT PATTERN

SCALE 1"=333'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

TAMS

TASK 4 – POLICY CHANGES

In Task 4, IEP and TAMS developed policy options for implementation of the preferred development strategy. These policies relate to land use, septic disposal, parking, traffic, and pedestrian circulation. Following review and refinement by the Planning Board, these policies were developed into the specific implementation measures set forth under Task 5.

4.1 LAND USE

4.1.1 Regulatory Policies

The principal set of policies for managing land use in Ashburnham Center consists of proposed amendments to the Zoning By-Laws. Five basic regulatory changes are recommended, including the establishment of three new zoning districts and revisions to the By-Laws' sign regulations and site plan review process.

A. Establish Village Commercial Zoning District

The proposed Village Commercial (V-C) district[4] is intended to foster appropriate reuse of existing structures within the downtown area in harmony with the historic character and dense development pattern of the downtown. The dimensional regulations for the proposed district will include lower lot area and frontage requirements and reduced maximum building heights, in order to encourage future development to occur at a scale comparable to that of the existing structures. In addition, the V–C district will allow greater lot coverage ratios, in order to maintain the pedestrian scale of the downtown area and to discourage the development of structures isolated from surrounding uses.

The use regulations for the Village Commercial district will be generally the same as for the Business district. However, the Village Commercial district regulations will be more stringent with respect to certain uses, including automotive and industrial activities and tourism-related activities such as hotels and commercial outdoor amusement places. [Note: Existing uses which would be prohibited or controlled by special permit under this recommendation will be "grandfathered" as non-conforming uses and allowed to continue in accordance with Section 1.3 of the Zoning By-Laws.]

In order to facilitate commercial development on smaller lots within the Village Commercial district, it is recommended that exemptions from the off-street parking requirements be available on a special permit basis in exchange for contributions to the cost of developing public off-street parking in the proposed municipal plaza area (i.e., the site of the Highway Department garage) and public pedestrian linkages between the municipal parking area and other areas of the downtown. This will be implemented by inserting special provisions in Section 5.3 of the Zoning By-Laws.

B. Establish Village Office Zoning District

The "Village Office" district will permit limited office development along Water Street between Main Street and Chapel and Mill Streets, and along River Street and Gingerbread Land (between Water Street and Phillips Brook). This area is currently zoned Residential (R-A) and contains 21 parcels. Of these lots, only one currently conforms to the minimum lot area and frontage requirements (others may be nonconforming with respect to minimum building setback and maximum lot coverage requirements).

[4]This district corresponds to the "Village" district described under Task 3 (see Section 3.3). The designation has been changed under Task 4 due to the addition of a second proposed "Village" district, i.e., "Village Office (V–O)".

As in the V-C district, lot area and frontage requirements will be reduced in order to permit redevelopment within existing parcel and building dimensions.

The proposed Village Office district will permit conversion of residential structures built prior to 1989 to office uses by special permit from the Planning Board, subject to conditions regulating increases in lot coverage and floor area, provision of off-street parking, and screening from adjacent properties.

C. Establish Commercial-Industrial Zoning District

The Town should establish a Commercial-Industrial (C-I) district to apply to those parcels in the study area that are currently zoned for industry. The existing Industrial (I) district is inappropriate for the downtown area for two reasons. First, like the Business district, it establishes dimensional regulations which are out of character with the existing pattern of development in the downtown area. Of the eight downtown lots currently zoned Industrial, only three comply with the district's area and frontage requirements; and one of these three is largely within the R-A (Residential) district. Second, as its name suggests, the Industrial district is primarily restricted to industrial and wholesale uses, and only allows a limited range of business uses by special permit. In an area which is seen as the civic and business center of the Town, this stress on industrial uses has the potential for future land use conflicts.

In order to address the issue of inappropriate dimensional regulations, the proposed Commercial-Industrial district will have lot area, frontage and setback requirements that are substantially lower than those of the Industrial district, combined with a somewhat increased allowed lot coverage ratio.

The use regulations for the Commercial-Industrial district will be based on those of the existing Industrial district, but will be more restrictive with respect to industrial uses and more permissive with respect to appropriate commercial uses. For example, certain heavy industrial uses (e.g., scrap metal reprocessing) would be prohibited, while retail and office uses would be allowed as of right, rather than by special permit as at present.

D. Revise Sign Regulations

In accordance with the creation of the V-C and V-O zoning districts, it is recommended that new sign regulations be established to reinforce the character of the Village districts. These regulations will be more restrictive than those for the Business district, in order to encourage the conservation of the downtown area's traditional appearance and historic character. The type, number and size of signs permitted in these districts should allow necessary business identification and advertising at a scale appropriate to the pedestrian environment and to traffic moving at relatively slow speeds through the downtown.

In addition, it is recommended that the height of exempted private directional signs (Section 5.24(c) of the By-Laws) be limited to four (4) feet. This will ensure that such directional signs do not create confusion with public directional or safety signs, and do not add unnecessary visual "clutter" to the appearance of the downtown.

E. Revise Site Plan Review Process

The existing site plan review provisions (Section 5.10 of the Zoning By-Laws) incorporate general standards for review and approval of new construction throughout the Town. These provisions should be amended to include specific review standards pertaining to the Village Commercial District. Such standards should include the arrangement of driveways, parking areas and pedestrian pathways to ensure both traffic safety and maintenance of the visual character of Ashburnham Center; and guidelines for building design in harmony with the scale and appearance of existing structures.

4.1.2 Municipal Property Policies

A. Continue with Town Common Plan for Winchester Park

The Board of Selectmen's application for funding under the City and Town Commons Program is a vital element of the downtown plan. The rehabilitation of the New Common will create the northerly focal point for the downtown, reinforcing the role of Winchester Park as a community civic center.

In addition, the City and Town Commons plan envisions the provision of new pedestrian linkages between the New Common and the business area on Main Street. When the funding is received for this project, final design of these linkages can be incorporated into an overall pedestrian circulation plan for the downtown. Such a plan should be adopted by the Planning Board to serve as the basis for site plan and special permit reviews relating to private off-street parking and access in the Village Commercial district.

B. Retain Highway Department Site for Town Plaza and Municipal Parking

The site of the existing Highway Department office and garage is proposed to be developed as the southerly focal point for the downtown. Planning for the reuse of this site should encompass three elements.

B1. Identify future land uses for site: parking, public open space, wastewater treatment

The Highway Department site can potentially serve at least three public functions. First, it can provide a significant amount of public off-street parking, directly supporting the expansion of business uses on all four surrounding streets (Main, Central, and Puffer Streets and Maple Avenue). Second, a Town Plaza can be developed on a portion of the site, providing a public open space which can soften the impact of a large parking lot and further encourage the opening of rear access to the existing commercial properties on Main Street. Finally, it may be possible to locate a small community sewage treatment facility on an isolated part of the site (see Section 4.2.3 below).

The following list represents a rough example of how such uses might be allocated:

Use	Area (acres)	Per Cent of Site
Town plaza:	1.20	29%
Municipal parking (100 spaces at 325 square feet):	0.75	18%
Landscaping and circulation:	0.75	18%
Treatment plant:	1.50	36%

B2. Identify additional linkages needed

The successful use of the Highway Department site for municipal parking requires that new vehicular and pedestrian linkages be established within the downtown area. Appropriate vehicular access points must be provided to enable drivers to identify the parking area easily and to approach it safely and with minimal adverse impact on adjacent properties. It may be possible to use existing publicly-owned land to provide these access points: i.e., at the locations where the Highway Department property fronts on Central and Puffer Streets and Maple Avenue. However, there may also be more effective approaches that could be provided over existing privately-owned parcels adjacent to the Town property.

Similarly, the provision of convenient pedestrian access to Main Street will be essential to the success of a municipal parking area on the Highway Department site. Although pedestrians may walk to Main Street by way of either Central Street or Maple Avenue, this will be a circuitous route from the

middle of the block and may discourage many people from using the parking area. One or more mid-block linkages, designed exclusively for pedestrian use and provided with attractive landscaping, would encourage active use of the parking area. Any such pathways would require the use of existing privately-owned parcels between the municipal property and Main Street.

In such cases, the Planning Board may identify these approaches and pathways as part of the master circulation plan for the downtown, and require future development not to preclude their future use. These potential linkages may be prioritized for acquisition and development, and negotiations over site plan reviews and parking waivers may be directed toward their implementation.

B3. Identify potential surplus parcels for disposition

Although a significant area of the Highway Department property should be retained for municipal uses as described above, there may be fringe areas which are not needed for implementation of the downtown plan. If such surplus areas exist, the Town may decide to sell them for private development which does not conflict with their municipal use. The proceeds from such a sale would help the Town to finance the relocation of the Highway Department or the construction of necessary improvements such as public parking and pedestrian pathways.

The criteria for identifying parcels for disposition will include both private market factors and public planning concerns. From the private market perspective, a parcel should be located in a portion of the site that has good visibility and access and that is least likely to have soil contamination problems. From the point of view of the downtown plan, such a parcel should not preclude or obstruct public access or visibility for the Town Plaza and municipal parking lot, and should not present problems of compatibility with proposed adjacent public uses.

4.1.3 Other Planning Policies

A. Continue progress toward establishment of Downtown Historic District

The Ashburnham Historical Commission is in the process of delineating a proposed historic district in downtown Ashburnham. Once established, the historic district will provide a mechanism for design review of proposed development that will go beyond the level of review available under the Zoning By-Laws. This process should be encouraged and supported by the Planning Board.

The Planning Board should also solicit the Historical Commission's review of and recommendations on the proposed sign standards and site plan review standards included in this report. In addition, the Historical Commission should be involved in the planning of pedestrian linkages in the downtown area, because of its involvement in the City and Town Commons grant application for Winchester Park.

4.2 WASTEWATER DISPOSAL

4.2.1 Evaluation of Current Septic Disposal Practices

The current method of septic waste disposal used in the downtown area is on-site disposal of septic wastes. There is one small sewage treatment facility which services Cushing Academy. The information gathered as part of Task 2, Infrastructure Analysis, regarding the septic suitability of the soils and the subsurface unconsolidated deposits in the downtown area and the history of septic system failure indicate that the downtown area is poorly suited for on-site septic effluent disposal. This information was obtained from United States Geological Survey Hydrogeologic Atlas HA-476, the United States Department of Agriculture Soil Conservation Service Soil Survey Report, and an interview with the local Board of Health Agent.

As discussed in Section 3.2.3.1, estimates were made of current and buildout septic flow in the downtown area to be used in the nitrate loading calculations completed as part of Task 3. The current nitrate load to the ground water was estimated to be 16.37 mg/l in the till areas and 6.50 mg/l in the stratified drift areas. The value for the till areas (a majority of the Downtown area) is above the EPA MCL for nitrate of 10 mg/l. This also indicates the current septic disposal practices are unsuitable in most portions of the Downtown Area.

4.2.3 Viability of Further Development Using Current Septic Disposal Practices

Nitrate loading calculations for buildout under current zoning, buildout under "Village" zoning, and buildout under "Expanded Village" zoning, as discussed in Sections 3.2.3.1 and 3.3, indicate an increase in the estimated nitrate concentrations under any of the three buildout scenarios. These estimates are listed in the following table:

Buildout Scenario	Estimated Nitrate Concentrations		EPA
	Till Areas	Stratified Drift Areas	MCL
Present Zoning	24.76 mg/l	17.86 mg/l	10 mg/l
"Village" Zoning	24.44 mg/l	14.67 mg/l	10 mg/l
Expanded "Village" Zoning	25.16 mg/l	14.70 mg/l	10 mg/l

The two development alternatives would cause a lower estimate of nitrate concentration than that due to present zoning buildout. However the estimated nitrate concentrations for both development alternatives is above the EPA Maximum Contaminant Level for Nitrates. Thus the current on-site septic disposal practices are not viable for further development under any of the three proposed scenarios.

4.2.3 Alternative Septic Disposal Techniques

The only available alternative septic disposal techniques involve transporting the septic effluent off-site via sewer lines to a wastewater treatment plant. This would alleviate the current problems and would allow further development. Installation of sewer lines to be connected to the Gardner sewer system is currently under assessment by the Town. Because of the possibility of future expansion to other areas of the Town with existing septic contamination problems, this would be the preferred alternative for the downtown area.

Alternatively, the Town may consider installing a small wastewater treatment plant similar to the plant which serves Cushing Academy. The proposed wastewater treatment plant would service a concentrated area of the Downtown and would require approximately 1.5 acres of land. The

Massachusetts Department of Environmental Quality Engineering (DEQE) has strict guidelines which must be followed in order to have the operation approved. If the treated effluent is proposed to be discharged to surface water (i.e. Phillips Brook or the wetland near Puffer Street) additional federal permits are required.

4.3 TRANSPORTATION AND PARKING

The purpose of this section is to summarize the outcome of this public consultation exercise, to identify transportation and circulation goals and objectives, and to select potential proposals and policies for inclusion in the Action Plan.

4.3.1 Existing Issues and Problems

The traffic and parking issues identified during Tasks 1 and 2 can be summarized as follows:

- Through Traffic Conflict
- Intersection Safety
- Intersection Traffic Operation
- Pedestrian Safety
- Pedestrian Sidewalk/Pathway Provision
- Parking Lot Circulation/Conflict
- On-Street Parking
- Parking Supply
- Parking Location
- Traffic Speed
- Numerous Curb Cuts

Specific problems arising from these issues under existing conditions are described in detail in Section 2.2.5.

4.3.2 Build-out Analysis

Three zoning scenarios were selected for analysis, including "existing" zoning, "village" zoning and "expanded village" zoning, the specific requirements of which are described elsewhere. In order to allow comparisons to be made with existing conditions, parking demand rates and traffic generation factors were applied to the increments of additional development, over and above existing development, for each scenario.

The parking rates and trip factors adopted for the analysis were developed from research carried out by the Institute of Transportation Engineers, and were selected to represent typical types of development which might be expected to take place in Ashburnham. The spreadsheet model served to identify the implications for parking demand and traffic generation for each scenario, and also provided a useful comparison of the implication of the alternatives.

As expected, the model showed a substantial increase in parking demand for all three zoning alternatives ranging from some 1,100 spaces for "existing" zoning and 1,200 spaces for "village" zoning, to as much as 1,700 spaces for "expanded village" zoning. By comparison, the estimated potential parking supply in the Town at present is approximately 510 spaces. It should be noted that residential parking was excluded from the analysis, due to the fact that residential lots are generally self-sufficient in parking terms, and are likely to continue to be so.

It is considered that existing parking supply is roughly sufficient to meet existing demand, albeit that there are difficulties in respect of location of parking in relation to particular facilities. The clear implication of the analysis is therefore that parking supply is a major issue for future expansion and development, and the supply of parking is fundamental to whatever zoning is adopted. It should be kept in mind, of course, that the development potential included in each scenario represents an absolute build-out situation, and such intensity of development would not realistically occur.

As far as traffic operation is concerned, the model again showed increases in trip generation which reflect the increased scale of development which could theoretically occur under each scenario. Under "existing" zoning, some 8,600 additional daily trips were estimated, with 9,200 trips for "village" zoning and 15,000 trips for "expanded village" zoning. Such trips would, of course, be spread over the whole roadway network throughout the entire day. These results do not facilitate the analysis of specific impacts on the roadway network within the Town, but they do serve to demonstrate the relative implication of the alternative scenarios.

The overall conclusion to be drawn from the analysis is that the "existing" and "village" zoning scenarios have similar traffic impact implications, whereas the "expanded village" zoning would generate a significantly greater amount of traffic. This has obvious implications for the safety and operation of traffic in the Town Center, even if it is assumed that parking demand can be met as required in proportion to development expansion.

4.3.3 Public Meeting and Selection of Preferred Zoning

Following presentation of the assessment of existing and alternative future zoning at the Public Meeting on February 2, a number of specific issues and suggestions were raised during open discussion. The main traffic and parking points were as follows:

- It is desirable to eliminate through traffic from the main parking lot.
- Consideration should be given to "policing" the queue which occurs from the drive-in bank.
- The possibility of encouraging traffic to enter the main parking lot from Park Street should be explored.
- Intensification of development on Pleasant Street would have an adverse impact on its intersection with Main Street.
- One-way street options should be considered.
- The installation of warning lights to check traffic speeds should be considered.
- Reduced set-backs, with parking at the rear of buildings, would be desirable.
- The use of the existing Highway Department lot should be exploited.
- It is necessary to plan for the growth which will inevitably occur under any zoning scenario.

At a subsequent meeting of the Planning Board on March 16, it was decided that the "village" zoning should be adopted as the preferred development pattern, but with expansion only as far as the south side of Puffer Street and to Maple Avenue. Only limited expansion on Water Street was preferred, with conversion to office use by permit, but no new buildings. The desire to promote two public centers (Winchester Park/Civic Center and the Highway Department site) was also expressed as a major objective, and a number of traffic and parking issues were identified as requiring specific attention, as follows:

- The site plan review process should be used to limit curb cut and encourage common driveways.
- The provision of access to the rear of properties should be pursued through the site plan review process.
- Developers should be encouraged/required to complete missing sidewalks links.

- Pedestrian ways should be developed within the parking lot/Civic Center block.
- Parking supply should be developed in such a way as to encourage and support development on Central Street.
- On Water Street in particular, new public parking should be provided at the rear of new business, through the site plan review process and special permits.
- A pedestrian link should be developed between Water Street and the main parking lot.
- A solution to the parking/traffic difficulties at the intersection of Central Street (Route 101) and Main Street (Route 12) should be developed.

4.3.4 Policy Objectives

As a result of the assessment of existing conditions and the analysis of build-out implications, a number of key transportation goals and objectives have emerged. These reflect both the concerns of the community, and the aims of the Planning Board in selecting the preferred "village" zoning alternative. A number of transportation policies have been developed to meet these objectives, which can be broadly classified under headings of Vehicular Access, Pedestrian Links, Parking and Roadway Operation. In summary, these are as follows:

A. Vehicular Access:

- The number of curb-cuts should be restricted through the site plan review process to a minimum, by limiting driveways to individual lots to one per lot, with the exception of secondary access through adjacent lots.
- The spacing of curb-cuts and driveways should also be controlled through the site plan review process to provide a minimum distance of 35 feet between adjacent driveways or intersections.
- Where possible, collective access roads should be pursued through the site plan review process in order to reduce the number of access points/curb-cuts to the roadway network.
- The potential for rear access to commercial developments fronting Main Street and Water Street should be pursued.
- If the existing Highway Department site is developed for commercial use and public parking, the design should incorporate safe and easily identifiable access for vehicles.
- The site plan review process should be used to ensure proper layout and circulation within individual lots, to minimize hazards to pedestrians and other users both on and off-site.

B. Pedestrian Links:

- The continuity of side-walks should be improved and enhanced through the site plan review process, and missing links should be completed where appropriate.
- If the existing Highways Department site is developed for commercial use and public parking, direct pedestrian links to Main Street should be defined and pursued as alternatives to the use of Central Street and Maple Avenue.
- Pedestrian routes and links within the existing main parking lot and Winchester Park should be defined and enhanced.

- The potential for pedestrian links from the main parking lot to Water Street and/or new office uses should be pursued.

- Pedestrian safety should be improved and enhanced through the adoption of a program of roadway improvement schemes.

C. *Parking:*

- Except where special permits provide otherwise, parking standards in accordance with the requirements of the Zoning Laws should be provided.

- Required parking should be provided within the relevant development lot, and should be properly related to the development which it is intended to serve.

- The potential for additional public parking should be actively pursued through the development of the existing Highway Department site.

- On-street parking should be eliminated where it creates hazards or conflict for the safety and free flow of vehicles and pedestrians.

- A policy for the control and enforcement of on-street parking should be adopted.

- Where appropriate, off-street parking should not be provided on the frontage of lots abutting the roadway network.

D. *Roadway Operation*

- A program of roadway improvement schemes should be developed to address existing deficiencies and problems, and to minimize the impact of future development upon the roadway network.

- Changes in roadway circulation should be investigated to minimize conflicts of traffic movements at intersections and to reduce conflict of through traffic with local traffic and pedestrian activity.

TASK 5 – ACTION PLAN

5.1 INTRODUCTION

This section presents the proposed Action Plan for implementation of the policies identified under Task 4. As in previous phases of the Downtown Planning Project, the recommendations are grouped under three headings: land use, wastewater disposal, and transportation and parking. However, it should be recognized that, at this stage of the project, there are strong interconnections among these groupings. For example, a number of the transportation and parking policies must be implemented through the land use regulatory structure; and implementation of municipal properties policies will depend in part upon resolution of the strategy for wastewater disposal and treatment.

5.2 LAND USE

5.2.1 Regulatory

Under Task 4, conceptual approaches to zoning amendments for the downtown area were presented. These amendments would create three new zoning districts specifically designed for conditions in the downtown area, and revise the current site plan review and sign regulations. The following sections elaborate on and refine these recommendations, incorporating the Planning Board's comments on the Task 4 working paper.

5.2.1.1 Village Commercial Zoning District

The Village Commercial (V-C) district is intended to foster appropriate reuse of existing structures within the downtown area in harmony with the historic character and dense development pattern of the downtown. In order to implement this recommendation, the following amendments must be made to the Zoning By-Laws.

Section 2. USE DISTRICTS

§2.1 Types of Districts

Add "V-C Village Commercial" to the list of districts.

Section 3. USE REGULATIONS

§3.1 Schedule of Use Regulations

The schedule of use regulations for the Village Commercial district shall be generally the same as for the Business district, with the following differences:

Use		B	V-C
3.25 (g)	Drive-in or open-air restaurant ...	Sp	N
3.25 (h)	Sales of motor vehicles, etc.	Y	N
3.25 (i)	Service station and/or repair garage ...	Sp	N
3.25 (j)	Autobody, welding or soldering shop	Sp	N
3.25 (l)	Undertaking establishment or funeral home	Y	Sp
3.25 (r)	Hotel, motel, or overnight cabins	Y	N
3.25 (t)	Commercial outdoor amusement or recreation place ...	Sp	N
3.25 (u)	Bed and breakfast establishment conducted as a home occupation in a residential structure, consisting of the renting of not more than six (6) sleeping rooms used by transients and travelers. Rooms offered for rent may or may not have attached bathrooms but may not include cooking facilities.[5]	[New]	Sp
3.26 (e)	Light industrial uses ...	Sp	N

Existing uses which would be prohibited or controlled by special permit under this recommendation will be "grandfathered" as non-conforming uses and allowed to continue in accordance with Section 1.3 of the Zoning By-Laws.

§3.3 Special Conditions

Add the following subsection:

3.32 In the Village Commercial District, access to a use permitted as a matter of right on an adjacent parcel shall be permitted, even if not permitted in the V-C district.

Section 4. DIMENSIONAL REGULATIONS

§4.1 Schedule of Dimensional Regulations

Insert the following dimensional regulations for the Village Commercial district:

Minimum Lot Area (Sq. Ft.)	Minimum Frontage (Ft.)	Minimum Yards Front (Ft.)	Side/Rear (Ft.)	Maximum Bldg. Height (Stories/Ft.)	Maximum Lot Coverage
10,000	50	20 (5)	10	2.5 / 35	50%

(5) In the Village Commercial district, the following additional front yard provisions shall apply:

(a) The *maximum* front yard permitted shall be thirty (30) feet.

(b) A minimum of 80 per cent of the front yard shall be landscaped open space.

(c) The Planning Board may, by special permit, reduce the required size of a front yard in the V-C district.

[5]This is a new section of the use regulations, responding to specific concerns raised by the Planning Board in its review of Task 5. The proposed description of a "bed and breakfast establishment" may be included in Section 3.25 as set forth here, or as a new definition under Section 1.5 of the By-Laws.

Section 5. SPECIAL REGULATIONS

§5.3 Off-Street Parking and Loading Requirements

In order to facilitate commercial development on smaller lots within the Village Commercial district, it is recommended that exemptions from the off-street parking requirements be available on a special permit basis in exchange for contributions to the cost of developing public off-street parking in the proposed municipal plaza area (i.e., the site of the Highway Department garage) and public pedestrian linkages between the municipal parking area and other areas of the downtown.

In order to implement this recommendation, it is recommended that the following provisions be inserted in Section 5.3 of the Zoning By-Laws:[6]

5.34 Special Regulations for Village Commercial District – The following regulations are intended to support commercial development in the Village Commercial district by establishing a mechanism for provision of public off-street parking facilities in lieu of private off-street parking.

a. Except for buildings or parts of buildings designed, intended to be used, used or occupied for residential use, all or a portion of the required off-street parking may be waived by the Planning Board by special permit when the property is located within the Village Commercial district, provided that:

(1) The Board finds that there are sufficient publicly-owned parking spaces in the vicinity of the property to justify the waiver without detriment to the public health, welfare and safety; *and*

(2) The owner or occupant of the property on which the waiver is to be applied pays to the Town a fee equal to the fair market value of the waived parking spaces (the area of which shall be determined by the number of waived spaces times 300 square feet) plus the cost of converting such spaces into a parking lot, as estimated by the Planning Board with the advice of the Highway Superintendent.

b. If the property owner donates to the Town a public right-of-way providing an important pedestrian or vehicular linkage in accordance with a downtown circulation plan adopted by the Planning Board, the Board may reduce the fee specified in paragraph 5.34 a.(2) above by an amount equal to the value of the donation, up to the total amount of the fee.

c. All fees collected under this Section, and all interest earned thereon, shall be deposited in a separate Parking Facilities Fund established by the Board of Selectmen and shall be used only for the acquisition of land, improvement, or maintenance of municipally-owned off-street parking facilities for the benefit of those buildings, structures and uses in the Village Commercial district and adjacent areas.

d. Any waiver of off-street parking approved under this Section shall run with the land, and any subsequent change of use that requires more parking shall require

[6]The proposed special parking regulations for the Village Commercial district are based in part on zoning ordinances from Burbank and Mill Valley, CA, and Lake Forest, IL, as set forth in *Flexible Parking Requirements*, by Thomas P. Smith (Planning Advisory Service Report No. 377; American Planning Association, August 1983).

subsequent action to satisfy the additional parking requirement. No refund of any payment shall be made when there is a change to a use requiring less parking. Such payment and/or donation shall be made to the Town in total prior to the issuance of a building permit.

The Parking Facilities Fund described under paragraph 5.34c above could be established by vote of Town Meeting. Such a vote may not be strictly necessary, since towns are authorized to accept donations earmarked for specific purposes and to expend such funds without further appropriation. However, it is always a good practice to validate through the Town Meeting process the decisions of local officials regarding the expenditure of available funds for capital improvements.

5.2.1.2 Village Office Zoning District

The "Village Office" district will permit limited office development along Water Street between Main Street and Chapel and Mill Streets, and on adjacent parcels on River Street and Gingerbread Lane. This area is currently zoned Residential (R-A) and contains 21 parcels.

Section 2. USE DISTRICTS

§2.1 Types of Districts

Add "V-O Village Office" to the list of districts.

Section 3. USE REGULATIONS

§3.1 Schedule of Use Regulations

The schedule of use regulations for the Village Office district shall be the same as for the Residential A district, with only the following difference:

Use		R–A	V-O
3.25 (c)	Office or agency for non-resident business/prof. use	N	Sp

§3.3 Special Conditions

Add the following subsection:

3.33 In the Village Office District, a use allowed by special permit, but prohibited in the R–A district, shall be established only through the conversion of part or all of a residential structure in existence on January 1, 1989. Said conversion shall comply with the following standards and requirements:

a. The conversion may not involve any expansion in lot coverage or floor area, or any exterior alterations, with the exception of the following:

- Construction of porches, bay windows or similar appurtenances not exceeding two hundred square feet in area;
- Addition of dormer windows or gables not over twelve feet in width on an existing roof.

b. Off-street parking shall be provided as required in Section 5.3 of the Zoning By-Laws.

c. No off-street parking area, except for one required driveway, shall be located between the street line and the front line of the building.

d. All off-street parking areas shall be screened from adjacent properties by provision within the required side and/or rear yard of:

- dense plantings with a minimum height of four feet; or
- appropriate low fencing as permitted by Section 4.37 of the By-Laws.

Section 4. DIMENSIONAL REGULATIONS

§4.1 Schedule of Dimensional Regulations

Of the 21 lots in the area to be rezoned to Village Office, only one currently conforms to the minimum lot area and frontage requirements (others may be nonconforming with respect to minimum building setback and maximum lot coverage requirements). As in the Village Commercial district, new dimensional regulations are recommended in order to encourage the preservation of the existing character of the area.

Insert the following dimensional regulations for the Village Office district:

Minimum Lot Area (Sq. Ft.)	Minimum Frontage (Ft.)	Minimum Yards Front (Ft.)	Minimum Yards Side/Rear (Ft.)	Maximum Bldg. Height (Stories/Ft.)	Maximum Lot Coverage
10,000	75	20	10	2.5 / 35	40%

Section 5. SPECIAL REGULATIONS

§5.3 Off-Street Parking and Loading Requirements

Consideration may be given to incorporating similar special permit provisions as set forth above for the Village Commercial district, in order to encourage the creation of common driveways and pedestrian linkages to the Winchester Park area.

5.2.1.3 Commercial-Industrial Zoning District

The Commercial-Industrial (C-I) district will apply to those parcels in the study area that are currently zoned for industry, except for parcels (or portions thereof) which will be included in the new Village Commercial district. The existing Industrial (I) district is inappropriate for the downtown area for two reasons. First, like the Business district, it establishes dimensional regulations which are out of character with the existing pattern of development in the downtown area. Of the eight downtown lots currently zoned Industrial, only three comply with the district's area and frontage requirements; and one of these three is largely within the R-A (Residential) district. Second, as its name suggests, the Industrial district is primarily restricted to industrial and wholesale uses, and only

allows a limited range of business uses by special permit. In an area which is seen as the civic and business center of the Town, this stress on industrial uses has the potential for future land use conflicts.

The Commercial–Industrial district will apply to two large parcels on the easterly side of Maple Avenue and a third parcel on the southerly side of Puffer Street. All existing industrially-zoned frontage on Main Street, and most frontage on Maple Avenue, will be rezoned to the C-I district. This is intended to encourage a primarily commercial character along these streets, as well as to protect the wetlands area created by the Phillips Brook dam off Maple Avenue from adverse impacts from future industrial encroachment.

Section 2. USE DISTRICTS

§2.1 Types of Districts

Add "C-I Commercial–Industrial" to the list of districts.

Section 3. USE REGULATIONS

§3.1 Schedule of Use Regulations

The schedule of use regulations for the Commercial-Industrial district shall be generally the same as for the Industrial district, with the following differences:

Use		I	C-I
3.23 (c)	Cellar hole or basement area used as a dwelling ...	Sp	N
3.25 (a)	Retail store distributing merchandise ...	Sp	Y
3.25 (b)	Craft, consumer, etc., service establishment ...	Sp	Y
3.25 (c)	Office or agency for non-resident business or prof. use	Sp	Y
3.25 (f)	Restaurant, etc., providing ... live entertainment ...	N	Sp
3.25 (g)	Drive-in or open-air restaurant ...	Sp	N
3.25 (m)	Animal or veterinary hospital	N	Sp
3.25 (s)	Commercial indoor amusement or recreation place ...	N	Sp
3.26 (d)	Airport or heliport	Sp	N
3.26 (f)	Excavation, processing and storage of oil, loam, etc.	Sp	N
3.26 (g)	Reclamation, processing, storage and sale of scrap ...	Y	N

Section 4. DIMENSIONAL REGULATIONS

§4.1 Schedule of Dimensional Regulations

Insert the following dimensional regulations for the Commercial-Industrial district:

Minimum Lot Area (Sq. Ft.)	Minimum Frontage (Ft.)	Minimum Yards Front (Ft.)	Minimum Yards Side/Rear (Ft.)	Maximum Bldg. Height (Stories/Ft.)	Maximum Lot Coverage
25,000	125	20	10	3.0 / 40	40%

5.2.1.4 Revisions to Sign Regulations

A. Amend Section 5.2 of the Zoning By-Laws by renumbering sections 5.23 through 5.25 as new sections 5.25 through 5.27, and inserting the following new sections 5.23 and 5.24:[7]

5.23 Village Commercial Districts – In Village Commercial Districts the following signs only are permitted in addition to those permitted in Residential Districts.

a. Two (2) non-flashing signs per establishment. Such signs may include any of the following:

(1) Wall sign, attached parallel to the exterior surface of a building or structure and projecting not more than fifteen (15) inches from the building surface. Such sign shall not exceed thirty (30) square feet in area; shall not obscure architectural features of the building, not limited to features such as arches, sills, mouldings, cornices, and transoms; and shall not extend above the lowest point of the roof, nor beyond the ends of the wall to which it is attached.

(2) Projecting sign, mounted to a wall and perpendicular to the building surface. Such sign shall be flat, shall not exceed ten (10) square feet in area on each side, and shall have a minimum clearance of eight (8) feet above grade when located adjacent to or projecting over a pedestrian way, and thirteen (13) feet when projecting over an alley or driveway. A sign which overhangs a public way (including a sidewalk) shall not project closer than two (2) feet to the curb line and shall be covered by a public liability insurance policy which names the Town as the insured party.

(3) Awning sign, painted on or attached to the cover of a movable metallic frame, of the hinged, roll or folding type of awning. Such sign must be painted on or attached flat against the surface of the awning, but not extend beyond the valance or be attached to the underside; and shall have a minimum clearance of eight (8) feet above grade for pedestrian clearance. Lettering on an awning sign shall not exceed ten (10) inches in height, and the total area of an awning sign shall not exceed twenty (20) square feet.

(4) Window sign, painted or mounted onto a window pane, or hung directly inside the window, with the purpose or effect of identifying any premises from the sidewalk or street. The area of such signs shall not exceed thirty per cent (30%) of the window area in which they are displayed.

b. One (1) wall-mounted, non-flashing directory sign per building, not exceeding twelve (12) square feet, plus one (1) square foot for the name of each establishment in the building.

[7]The proposed sign regulations for the Village Commercial and Village Office districts are based in large part on the "Comprehensive Model Signage Bylaw" in *Dealing with Change in the Connecticut River Valley: A Design Manual for Conservation and Development*, by Prof Robert D. Yaro, Randall G. Arendt, and others (Massachusetts Department of Environmental Management & Center for Rural Massachusetts, January 1988); pages 149-164.

c. Notwithstanding the above, the total area of all signs on any building or parcel shall not exceed one and one-half square feet (1.5 sq. ft.) per linear foot of storefront.

d. All signs shall be made of wood or metal. Colors should be chosen to complement the facade color of the building; and dark backgrounds with light-colored lettering shall be preferred.

e. Signs shall be illuminated only with steady, stationary, shielded light sources directed solely onto the sign without causing glare. Internal illumination of signs is prohibited. Signs shall not be illuminated directly or indirectly between the hours of 11:00 p.m. and 7:00 a.m. unless the premises are open during such hours.

5.24 Village Office Districts – In Village Office Districts the following signs only are permitted in addition to those permitted in Residential Districts; provided that the total area of non-temporary signs on any parcel shall not exceed thirty (30) square feet.

a. One (1) non-flashing, free-standing sign per building. Such sign shall be flat; shall not exceed six (6) square feet in area per establishment on each side, nor sixteen (16) square feet in total area on each side; and shall not exceed four (4) feet in height above grade.

b. One (1) wall-mounted sign, attached parallel to the exterior surface of the building, identifying the principal entrance to the office uses in the building. Such sign shall shall not exceed twelve (12) square feet in area and shall not project not more than six (6) inches from the building surface; shall not obscure architectural features of the building, not limited to features such as arches, sills, mouldings, cornices, and transoms; and shall not extend above the first story of the building, nor beyond the ends of the wall to which it is attached.

c. All signs shall be made of wood or metal. Colors should be chosen to complement the facade color of the building; and may include white backgrounds with black lettering or dark backgrounds with light-colored lettering, as appropriate for the specific building.

d. Signs shall be illuminated only with steady, stationary, shielded light sources directed solely onto the sign without causing glare. Internal illumination of signs is prohibited. Signs shall not be illuminated directly or indirectly between the hours of 7:00 p.m. and 7:00 a.m. unless the premises are open during such hours.

B. Amend paragraph (c) of former Section 5.24 (i.e., new Section 5.26), "Exempted Signs", by adding the words "and not exceeding four (4) feet in height" before the first comma.

5.2.1.5 Revisions to Off-Street Parking Requirements

Following the completion of Task 4, it was determined that the Zoning By-Laws' requirements for provision of off-street parking should also be amended. In many cases, current regulations are too stringent, that is, they require considerably more parking spaces than are necessary to serve the applicable uses.

In part, this is due to an inadequate differentiation of uses: for example, the regulations require the same number of spaces for retail and wholesale uses, although the parking demand of wholesale establishment tends to be only about one-fourth that of retail uses of a comparable size.

This inappropriate schedule of parking requirements has two interrelated consequences that are detrimental to the long-term vitality of Ashburnham Center. First, the requirement for more parking spaces than are necessary makes development more difficult, in light of the downtown area's limited acreage. Without zoning relief, the regulations will limit future expansion of businesses other than by combining parcels and creating larger parking lots. Second, if development does occur in compliance with the existing regulations, the additional paved areas for off-street parking will detract from the historical character of the Center.

Accordingly, it is recommended that Section 5.32 of the Zoning By-Laws be amended by deleting paragraphs b and d – i and substituting in their place the following:

b. One (1) space for each sleeping room in a tourist home, boarding or lodging house, motel, hotel, or bed and breakfast establishment, plus required spaces for facilities used for eating, drinking, assembly, etc.

...

d. One (1) space for each three (3) beds in a hospital or sanitarium.

e. One (1) space for each three (3) beds for other institutions devoted to the board, care or treatment of humans.

f. One (1) space for each two hundred (200) square feet, or fraction thereof, of floor area of any retail or service establishment.

g. One (1) space for each eight hundred (800) square feet, or fraction thereof, of floor area of any wholesale establishment, but not less than five (5) spaces per enterprise.

h. One (1) space for each two hundred fifty (250) square feet, or fraction thereof, of floor area of any office or professional building; except that one (1) space per one hundred fifty (150) square feet shall be provided for medical offices.

i. One (1) space for each one hundred seventy-five (175) square feet, or fraction thereof, of floor area of any bank, plus one (1) space for each two hundred fifty (250) square feet of area not devoted to customer service.

j. One (1) space for each eight hundred (800) square feet of floor area, or one (1) space per employee, whichever is greater, for any industrial use.

k. One (1) space for each two (2) employees and one (1) space for three (3) seats, permanent or otherwise, for patron use for restaurants and other places serving food or beverages.

l. One (1) space for each four (4) persons capacity for any theater, auditorium or other place of amusement or assembly.

m. Adequate spaces to accommodate customers, patrons and employees of other business and professional uses not specified, but not less than one (1) space per two hundred fifty (250) square feet of building area.

n. Adequate spaces to accommodate customers, patrons and employees shall be provided for automobile service stations, drive-in establishments, open-air retail business and amusements, and other permitted uses not specifically enumerated herein.

5.2.1.6 Revisions to Site Plan Review Process

The existing site plan review provisions (Section 5.10 of the Zoning By-Laws) incorporate general standards for review and approval of new construction throughout the Town. These provisions should be amended to include specific review standards pertaining to the Village Commercial and Village Office Districts. It is therefore recommended that a new Section 5.104 be inserted, incorporating the following requirements:[8]

5.104 Site Plan Review Requirements for the Village Commercial and Village Office Districts

5.1041 – The purpose of this section is to provide detailed review procedures and standards for the Village Commercial and Village Office districts in order to protect and enhance the character of the downtown area and to prevent adverse impacts on traffic, utilities and property values therein. The requirements of this section shall supplement, and shall not replace, the requirements of sections 5.102 and 5.103.

5.1042 – Content of the Site Plan. In addition to the requirements for site plans generally, a site plan for development in the Village Commercial or Village Office districts shall include a drawing of all proposed structures (including existing structures for which exterior alterations are proposed). The drawing shall include color and type of surface materials and shall show elevations of all sides of the structures.

5.1043 – Site Plan Review Standards. In addition to the standards of review set forth in sections 5.1035 through 5.1037, the Planning Board shall use the following standards in reviewing proposed developments in the Village Commercial and Village Office districts:

A. Relation of building to environment: New development shall be related harmoniously to the terrain, to the scale and architecture of existing nearby buildings, and to the character of Ashburnham Center.

B. Preservation of the landscape: The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal; and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

C. Circulation:

(1) Parking areas and driveways shall be designed with respect to surrounding streets and pedestrian ways, number of access points to streets, general interior circulation, adequate width of drives, and separation of pedestrian and vehicular traffic so as to reduce hazards to pedestrians and motorists.

[8]The specific design standards of the proposed regulation are drawn from the following sources: (1) Town of Brookline, "Environmental Impact and Design Review" regulations (Zoning By-Law, Section 5.09); (2) Town of Framingham, off-street parking regulations (Zoning By-Law, Section IV.B); and (3) City of Lowell, Division of Planning and Development, *Lowell: The Building Book*, design guidelines for commercial buildings.

(2) No portion of a driveway at the street line shall be closer to an intersection than 35 feet, measured from the edge of the driveway to the extension of the nearest street line of the intersecting street.

(3) No more than one (1) driveway shall be permitted for any lot, except that this shall not prohibit primary or secondary access to a lot by right-of-way over a separate lot.

(4) No parking area shall be located between the street line and the front building line of any structure on a lot.

D. Building design: New buildings should respect the character of the neighboring buildings and the character of Ashburnham Center. The following guidelines are suggested:

(1) Facade rhythm: The floor to ceiling height of a new building should correspond to the dimensions on neighboring buildings; window and door openings should be positioned like the arrangement on neighboring structures.

(2) Facade openings: The combined area of openings on the new facade should not exceed three per cent (3%) of the total facade area. Openings should be proportioned so that the height is at least twice the width, but never more than three times. Smaller basement and attic windows may be excluded from this restriction as may singular architectural features such as doors and bay windows.

5.2.2 Municipal Properties

5.2.2.1 Winchester Park – Town Common Plan

The Board of Selectmen's application for funding under the City and Town Commons Program is a vital element of the downtown plan. The rehabilitation of the New Common will create the northerly focal point for the downtown, reinforcing the role of Winchester Park as a community civic center.

In addition, the City and Town Commons plan envisions the provision of new pedestrian linkages between the New Common and the business area on Main Street. When the funding is received for this project, final design of these linkages can be incorporated into the pedestrian circulation plan for the downtown, as indicated in the transportation element of this report (Plan A and Figure IV).

5.2.2.2 Highway Department Site – Future Municipal Uses

The Town plans to relocate the existing Highway Department office and garage to another site outside the downtown area, thus freeing up a significant parcel in the downtown area for reuse. Consideration has been given to selling all or part of the property in order to help finance the relocation of the Highway Department.

The Planning Board has stated that its policy is to retain the entire Highway Department parcel for future municipal uses. This plan proposes to develop the Highway Department site as the southerly focal point for the downtown. Therefore, no Town property in this area should be sold until it is determined surplus to the needs identified in this report.

Planning for the reuse of this property should include the following three elements:

A. Identify future land uses for site

Three municipal functions were identified in the previous Working Paper for the Highway Department site: off-street parking, public open space, and wastewater treatment. Further site analysis and planning is necessary to identify specific locations within the parcel for each use. However, the following general conclusions can be reached at this point:

1. Off-Street Parking: General locations of off-street parking are indicated on Plan A. In order to maximize the potential utilization of the property, these parking areas are located in areas of the site closest to the existing businesses along Main and Central Streets. Vehicular circulation is provided along the southerly and easterly edges of the property.

2. Open Space: In addition to landscaping within the municipal parking lot(s), the Highway Department site can provide significant open space opportunities. One possibility is for development of a Town Plaza on a portion of the site near the Main Street businesses, providing a public open space which can soften the impact of a large parking lot and further encourage the opening of rear access to the existing commercial properties. Another possibility is the creation of a mini-park or playground at the intersection of Central and Puffer Streets. This would create a clear definition of the southerly edge of the downtown area as well as providing a public open space resource for this part of the downtown.

3. Wastewater Treatment: It may be possible to locate a small community sewage treatment facility on an isolated part of the site, as described in the following section. Such a facility would require about 1.5 acres, or roughly one-third of the total site area. With careful site planning, the facility could be integrated into the open space and parking areas, thereby maximizing the use of the property.

B. Implement needed linkages

The successful use of the Highway Department site for municipal parking requires that new vehicular and pedestrian linkages be established within the downtown area. Appropriate vehicular access points must be provided to enable drivers to identify the parking area easily and to approach it safely and with minimal adverse impact on adjacent properties. Similarly, the provision of convenient pedestrian access to Main Street will be essential to the success of a municipal parking area on this site.

These linkages have been identified schematically in the transportation element of this report (see Plan A). The Planning Board should adopt this report as the master circulation plan for the downtown, and require future development not to preclude the future development and use of such linkages. In order to implement the plan, the Planning Board should prioritize these linkages for acquisition and development, and should direct negotiations regarding site plan reviews and parking waivers toward the donation of necessary rights-of-way and/or the construction of priority improvements.

C. Identify potential surplus parcels for disposition

The potential municipal uses identified for the Highway Department property are unlikely to leave any significant amount of land available for sale to non-municipal users. However, there may be fringe areas which are not needed for implementation of the downtown plan, particularly if detailed site analysis indicates that the location of a wastewater treatment facility on the property is infeasible or undesirable. If such surplus areas exist, the Town may decide to sell them for private development which does not conflict with their municipal use. This should be the final step in the re-use process, and should not be taken until it is clear that the property is not needed for municipal uses.

5.3 WASTEWATER DISPOSAL

As noted in Section 4.2.3, the current on-site septic disposal practices are not viable for further development under any realistic development scenario. The only available alternative septic disposal technique involves transporting the septic effluent off-site via sewer lines to a wastewater treatment plant. This would alleviate the current problems and would allow further development.

Before discussing the most recent steps that the Town has taken relative to wastewater treatment facility planning, it is important to note the significant regulatory procedures which must be followed. Since the inception of the Federal Clean Water Act (P.L. 93-523) as amended in 1981, and the Massachusetts Clean Water Act (MGL Chapter 21, Sections 26-53), the Federal and State governments have adopted increasingly strict regulations for planning and building treatment facilities and collection systems.

During the past ten years, the EPA and Massachusetts Division of Water Pollution Control (DWPC) have substantially revised the approval process for building adequate facilities for two reasons. First, there is a growing concern over the impact of existing facilities on ground and surface water resources and their ability to protect the quality of water in the Commonwealth. Secondly, the rapid change in water pollution control technology (which, in part, is due to the State's unprecedented residential and economic growth) has required a much more comprehensive and lengthy review and approval process. For example, the recent proliferation and use of small sewage treatment plants across Massachusetts has resulted in recent changes in the State's design guidelines, originally adopted in 1975.

In attempting to comply with Federal and State Clean Water Acts, the Town's Water Department initiated the facilities planning and design steps required in order to receive approval and qualify for state and federal construction funds. Through the work of the Town's consultant, SEA, a Facility Plan and Design has been prepared and actually approved by the State during the past five years. While this original Plan proposed to build a collection system to be pumped to a Gardner treatment facility, this "regional" solution has been consistently rejected by Ashburnham residents at Town Meetings over this period

Having failed to obtain approval for the "Gardner" plan, the Town recently (December, 1988) submitted a revised Facilities Planning proposal to DWPC for review and approval. If approved by the State, the updated Facility Plan would re-evaluate project need, existing and future conditions, alternative treatment solutions, and financial capacity and requirements. The proposal has identified three options for further analysis:

- Option 1. Gardner: Confirm that the Gardner facility is no longer an option. (The City originally set aside a 150,000-gpd allocation for the Town; however, it has since reallocated the capacity in the absence of Ashburnaham approval).

- Option 2. Fitchburg: Evaluate the feasibility of constructing a collection system to be connected to the Fitchburg-East Treatment plant.

- Option 3. In-Town: Compare the above alternative(s) with constructing an In-Town system. A screening level analysis using generic locations will be completed for two types of treatment programs. The concept of utilizing either a centralized plant (with a Class 1 Discharge permit) or installing satellite package treatment plants through the Town will be examined.

In carrying out the "In-Town" option, the Town's consultant should also consider the installation of an interconnected or independently operated small wastewater treatment plant for the proposed expanded Village District. In looking at existing and future needs and conditions for this alternative, several factors should be considered. Based upon the estimated build-out septic flow for the proposed

district (excluding Cushing Academy), the facility will need a 50,000-gpd capacity. In addition, the option of combining the Village and Cushing Academy treatment needs should assessed. Currently, Cushing's utilization is approximately 35,000 gpd. The following section outlines the measures necessary in constructing, financing and managing such a facility.

5.3.1 Small Sewage Treatment Facility

Treatment facility development is implemented in a three-step process:

(1) Facility Planning, which determines the need, facility type and capacity of the proposed facility;

(2) Design, which includes the preparation of construction drawings, specifications and required contract documents; and

(3) Construction and initial operation of the facility.

As stated above, there are numerous laws and regulations which govern the planning, installation, operation, and maintenance of small facilities (15,000 to 250,000 gpd). The following is a brief explanation of the regulatory requirements at each governmental level which may be applicable:

A. Federal

The EPA conducts the Underground Water Source Protection Program, also known as the Underground Injection Control Program (UIC). The Program is designed to protect sources of drinking water from pollution and is divided into five classifications depending upon the type of injection practice proposed. Class I includes deep disposal wells for industrial and municipal waste. Class V includes injection wells used to discharge treated sewage. The EPA has delegated the UIC program in Massachusetts to DEQE, which has promulgated regulations for the implementation of the program consistent with the federal mandate (310 CMR 27.00).

B. State

Under the Massachusetts Clean Water Act, the Division of Water Pollution Control (DWPC) has been established within DEQE to carry out the statute. DWPC is authorized to implement a number of objectives which directly impact the approval and development of small treatment facilities:

1. Standards of minimum water quality.

2. Discharge permit program for effluent limits and procedures applicable to the management and disposal of discharges.

3. Requirements to establish monitoring, sampling, record keeping and reporting procedures.

4. Regulations for operation and maintenance of waste treatment facilities.

DWPC regulates ground discharging through Facility Plan approval and issuance of Permits as codified in 314 CMR. Each permit contains monitoring and reporting requirements to verify compliance through the installation of monitoring wells. The applicant must also submit detailed plans with a completed discharge permit application which includes an engineering report and hydrogeologic assessment. Following a review of legal, methodological, and policy issues raised by the project, DEQE sends a draft permit and fact sheet to the applicant and local Board of Health for review, comment and modification.

At this phase of the review, DEQE will issue a tentative determination either to approve or to deny the permit request; and a copy of the preliminary notice is also sent to the local Board of Health. Following a public comment period and receipt of acceptable plans by the Department, the final Permit is issued or denied subject to the applicant's request for an additional public hearing, if warranted. Once all issues are evaluated and addressed through the public hearing process, DEQE issues a final response and determination.

After the permit is approved, the applicant proceeds through contractor procurement and construction of the facility. Prior to facility start-up, the permittee must submit an Operation and Maintenance manual and Staffing Plan pursuant to 314 CMR 12.00. In addition, a certified wastewater treatment plant operator must be employed by the applicant to operate and maintain the facility. Finally, additional connections to the facility or extension of the collection system must also be reviewed, approved and permitted by DEQE.

C. Local

The local Board of Health is the primary local authority over the planning, design, construction and operation of a small sewage treatment facility. Under Title 5 of the Massachusetts Environmental Code, the Board of Health must issue a disposal works construction permit prior to construction. Because local requirements may be more stringent than the State regulations, project applicants are advised to consult with their local Board of Health early on in the Facility Planning process.

5.3.2 Financing

The type and amount of federal and state funds available to Ashburnham has changed substantially within the past year. Until recently, State and Federal assistance provided grants to municipalities carrying out treatment projects. Depending upon the activity and need, communities could receive up to 90% grant assistance. Today, the funding mechanism and availability are much different.

Basically, the federal and state programs are converting to a loan program at reduced levels of assistance to municipalities. Provided that Massachusetts has the proper legislation and matching loan program in place, EPA will make loans available to communities through DEQE. Similarly, the State has terminated project grant money and will be converting to a reduced-interest loan program pending the passage of proposed legislation. Should the State legislature enact the present bill being considered (House Bill 1000), the following changes in funding would occur:

Category	Previous fed/state funding	Proposed funding
High priority projects	90% grant assistance	Loan equivalent to 45% grant
Tier two projects	70% grants	Loan equivalent to 35% grant
Inflow/Infiltration studies	90% grants	Loan equivalent to 40% grant
Collection systems	50% grants	Loan equivalent to 25% grant

Should the bill pass, the EPA and State loan assistance would be combined and administered through a State Revolving Loan Program at DEQE. Once funds are available and projects are submitted, Ashburnham would be given a "high" or "Tier Two" priority. According to the pending legislation, high priority projects may be further eligible for hardship status which qualifies the community for a loan equivalent to a 75% grant.

In summary, while federal and state funding programs will most likely continue, the reduced levels of non-local funding will undoubtedly require greater local resources. We advise the Planning Board to consult with the Town's sewer consultant regarding the status of the new loan programs.

5.3.3 Management

Because the permitting and construction will be a lengthy and complex process, communities are advised to assign a Municipal Project Manager to the job. Ideally, the manager is a full-time municipal employee with experience in dealing with the regulatory agencies involved with the project. The project team will consist of:

- Architect/Engineer: An A/E will perform most of the work in the planning and design phases. Prior to permit approval, the firm's primary responsibilities are to complete the technical portions of the facility plan and prepare the design and construction drawings, contract documents, and project cost estimates.

- Construction Manager: Construction management services include developing, monitoring, and updating the project budget and schedule; reviewing A/E and construction contractor staffing plans; advising the A/E on construction phasing, trade practices, and suitability of construction materials, and inspecting construction.

- Treatment Plant Operator: The selection of a certified plant operator should be completed early on in the design phase of the project in order for the individual to understand the proposed design and operation of the facility. The operator can offer suggestions to improve maintenance and operation during design. The operator will have an opportunity to observe the construction of piping and other underground infrastructure which will be of assistance should operational problems occur.

5.4 TRANSPORTATION AND PARKING

Under Task 4 of the study, key transportation goals and objectives were developed, based upon the analysis of both existing conditions and the buildout scenarios. Specific planning policies have been formulated to assist the Town in achieving the preferred development pattern, and these include policies to meet the transportation objectives. The regulatory policies themselves are described elsewhere.

The main transportation objectives which the policies for the Village Commercial District are intended to achieve are summarized as follows:

- Restriction of the number, location and design of curb-cuts and driveways through the site plan review process.
- The provision of pedestrian and vehicular linkage through the site plan review process and special permits. Specific proposals in this respect are identified in the Action Plan, as described later in this section, and include proposals for Winchester Park, the existing main parking lot, the Highway Department site, and rear access to Main Street developments.
- The provision of proper off-street parking and on-site layout, again through the site plan review process. Parking requirements for the Zoning By-Laws will also be reviewed.
- Provision of additional public parking on the Highway Department site through municipal property policies for that site, including pedestrian linkage and vehicular access as identified in the Action Plan.
- The enhancement or completion of pedestrian sidewalks, through the site plan review process where appropriate. Again, specific proposals are identified in the Action Plan.

The policies for the Village Commercial District require a number of specific proposals to be identified. In addition, a program of general roadway improvement schemes for pedestrian and traffic operation and safety has been investigated. Included in this is the elimination of certain on-street parking, and the adoption of a policy for parking control.

In the following sections, the transportation proposals are grouped into four general categories: vehicular and pedestrian linkages; traffic circulation; parking; and traffic improvement measures.

5.4.1 Vehicular and Pedestrian Linkages

These proposals include both "on-street" facilities, and new "off-street" linkages. The latter are generally not capable of immediate implementation, and, as previously described, it is intended that they should be secured through the site plan review process and special permits. Proposals to be included in the Action Plan are illustrated on the accompanying Plan A.

5.4.1.1 Rear Access Routes

Rear access routes to serve commercial lots fronting Main Street should be established to allow servicing and access to parking to be eliminated where possible from Main Street, Central Street and Water Street. Four locations have been identified.

- Proposal VA1 – Rear access to Main Street lots, east of Central Street.

  As shown on Plan A, this route would serve all lots on the south side of Main Street between Central Street and Maple Avenue, and an additional spur to serve the lots on the east side of Central Street is included. It is not recommended that the route should be linked to the Highway Department site, as potential through traffic could interfere with activity on the access route itself.

- Proposal VA2 – Rear access to Main Street lots, west of Central Street.

  This route would serve lots on the south side of Main Street between Central Street and Pleasant Street, as well as a number of lots on the west side of Central Street. At present, it does not seem advantageous to extend the route through to Pleasant Street. As shown on Plan A, however, there is an alternative rear access from Pleasant Street to the Cumberland Farms/Pizza Restaurant lot, which could be implemented in isolation, if that lot is redeveloped, without connecting through to the adjacent lots.

- Proposal VA3 – Rear access to Main Street lots, east of Lawrence Street.

  This route, again shown on Plan A, makes use of the existing rear access through the main parking lot behind the Bank. If extended, this would also serve the lots on the eastern side of Lawrence Street.

- Proposal VA4 – Rear access to lots on west side of Water Street.

  These lots do not require rear access at present, and this proposal is intended to eliminate frontage access difficulties arising from future commercial use. A rear access could be established via a single vehicular connection to Water Street, as indicated on Plan A.

5.4.1.2 Vehicular Access to the Highway Department Site

For the anticipated use of the Highway Department site, including new public parking, vehicular access should be established from both Central Street and Maple Avenue.

- Proposal VA5 – Highway Department Site Access.

  Optimum locations for vehicular access are shown on Plan A, and these coincide with existing access points. Vehicular access through the site should not be direct, however, and a staggered route as indicated on Plan A should be provided, so that through traffic movement is not encouraged. There is potential to access the rear of the lot on the west side of Maple Avenue, and also the Puffer Street lots, from this route. The design of the new accesses should incorporate appropriate standards of geometry and sight-lines.

5.4.1.3 Pedestrian Routes

Three proposals for "off-street" pedestrian linkage have been identified, as follows:

- Proposal PR1 – Pedestrian linkage to Highway Department Site.

  As shown on Plan A, this pedestrian route provides an essential link between proposed new public parking in the Highway Department site and Main Street. This is designed to make the new parking attractive, by providing a convenient link to the center of commercial activity. It would also provide pedestrian access to the rear of lots on Puffer Street and Maple Avenue. It should be noted that "on-street" links are also proposed, as described in Section 4.1.4. Suggested location of parking within the Highway Department site is also indicated on Plan A.

- Proposal PR2 – Pedestrian linkage to Water Street.

  In anticipation of the conversion to office use on the west side of Water Street, a pedestrian link from Water Street to Memorial Drive, and the existing main parking lot, is proposed. As shown on Plan A, a pedestrian access route to the rear of the Water Street lots is also included.

- Proposal PR3 – Pedestrian linkage to Cushing Academy.

  An informal route is currently used to the Academy from Main Street, and also from Pleasant Street. It is proposed that a formal route from Pleasant Street should be established, as indicated on Plan A, and this should be related to the buildings and playing fields within the Cushing Academy complex.

5.4.1.4 On-Street Sidewalk Network

Plan B shows the existing network of sidewalks in the Downtown area, and locations where upgrading is required. Proposals for new sidewalk links are also shown. The proposals include the following:

- Proposal SW1 – Upgrading of sidewalks.

  In the locations identified, the existing sidewalk is deficient in respect of surfacing and delineation. These areas should be reinstated to provide continuous sidewalk links by appropriate re-surfacing, curbing or marking. On Main Street, in the areas fronting Cumberland Farms/Pizza Restaurant and the gas station/hardware store, the existing sidewalks are continuously interrupted by curb-cuts, and there is poor definition of the edges of the sidewalk. It is not possible to provide curbing along these sections owing to the existing curb-cuts, but the relevant sections should be properly delineated by surface markings, and ideally they should be re-surfaced in a different material, such as concrete or brick (Proposal T7). This would significantly improve safety for pedestrians.

- Proposal SW2 – New sidewalk links.

  There are a number of gaps in existing sidewalk provisions on Main Street, Pleasant Street, Central Street and Lawrence Street, which should be completed. Where land is not available within the public right-of-way, this might be achieved through the site plan review process. At the section on the north-eastern side of Central Street, an informal sidewalk across the paved frontages of adjacent lots (including the Fire Station) is provided, and this should ideally be formalized, including appropriate surfacing and delineation.

  Extensions of sidewalks, shown on Plan B, are proposed to link the existing network as far as the accesses to the Highway Department Site on Central Street and Maple Avenue, and on Memorial Drive to connect with the proposed pedestrian route to Water Street (Proposal PR2). Extension as far as Cushing Academy is also included along Academy Street from Central Street.

5.4.2 Traffic Circulation

The potential for revised traffic circulation was investigated, including the possible use of one-way operation on certain streets. In general, it was found that one-way circulatory systems would not provide satisfactory resolution of existing problems. Two changes in traffic circulation are proposed, however, as follows:

- Proposal TC1 – Two-way Traffic Operation on Memorial Drive.

  In order to reduce the amount of traffic entering the main parking lot directly from Main Street, close to the Central Street intersection, two-way traffic operation should be introduced on Memorial Drive, over its full length from Main Street. This would not only reduce the complexity of movements taking place at Central Street, but would also eliminate a certain extent of through traffic from the main parking lot.

  In the longer terms, it is recommended that consent be sought, perhaps through the Business Council, for the closure of the parking lot access from Main Street, so that all access would be provided via Memorial Drive. Access to the drive-through bank would in that instance have to be achieved by a U-turn loop within the parking lot.

  In the interim, a number of supporting proposals are recommended. First, the existing parking lot entry from Main Street should be re-striped to segregate bank traffic from parking lot traffic, in a way that encourages entry mainly from the east. This traffic improvement proposal (T9) is discussed later in Section 4.4, and is illustrated in both Figures IIB and IV. Entry to the bank from the west can obviously not be excluded at this stage. Second, the access to the parking lot from Memorial Drive should be reduced in width to rationalize in and out movement, as indicated in Figure IV (Proposal T10). Third, an advance advisory sign should be installed on Main Street eastbound to encourage use of Memorial Drive (proposal T11). This sign, "Entry to Parking Lot – Second Left", is also included in Figures IIA and IIB.

- Proposal TC2 – Alternative Route via Puffer Street/Maple Avenue.

  In order to reduce turning movements on Central Street at Main Street, Puffer Street/Maple Avenue could be used as an alternative route for traffic to and from Route 12 East and Route 101 North. Appropriate advisory signs on Central Street and Main Street would be required, as indicated on Plan A. In view of the existing residential uses on these roadways, however, it is recommended that this proposal should not be implemented until such time as residential uses are replaced by commercial uses.

In addition to the above circulation proposals, rationalization of the main parking lot layout is proposed, as discussed under Traffic Improvement Proposals in Section 4.4.

5.4.3 Parking

On-street parking on Main Street should be reduced in the interest of traffic and pedestrian safety. This will improve sight lines at intersections, and will facilitate further traffic improvements at Central Street, as described later. To ensure the effectiveness of on-street parking restrictions, it is essential to implement a policy of control and enforcement, as this will become an increasingly important aspect when future development takes place. Parking proposals therefore include the following:

- Proposal P1 – Elimination of On-street Parking at Selected Locations.

  Specific proposals for removing on-street parking on Main Street are identified, along with other traffic improvement proposals, in Figures I – III. Locations include:

  (i) Between Water Street and Town Hall entrance (2 spaces);

  (ii) Between Town Hall entrance and Memorial Drive (6 spaces);

  (iii) Between Memorial Drive and parking lot entrance (2 spaces);

(iv) In front of bank and gift shop on north side of Main Street (3 spaces);

(v) In front of shops, east of Central Street, on south side of Main Street (part only, 2 spaces);

(vi) In front of Insurance Agency to east of Lawrence Street (part only, 2 spaces).

These measures will involve the elimination of some 17 spaces, with approximately 15 remaining. While there is clearly a demand for this parking, the benefit of overall safety outweighs the loss of convenience for users. In any event, there is the potential to regain these spaces in off-street locations, either in the Highway Department site, or in the locations served by new rear access routes to Main Street lots.

- Proposal P2 – Parking Control and Enforcement Policy.

  A parking plan is currently being prepared by the Police Chief, and this will be reviewed prior to finalization of the Action Plan. Preliminary proposals are illustrated on Plan C. These proposals extend parking restrictions on at least one side of streets in and around the commercial district, with no-stopping/standing restrictions in the vicinity of intersections. Parking is restricted on both sides of Main Street, School Street and parts of Central Street and Memorial Drive. A time limit should be imposed on remaining on-street spaces, but the parking restrictions need only apply during the working day period, so that evening parking would be possible (other than at intersections).

  It should be emphasized that the suggested on-street parking restrictions are based upon recommendations for a long-term plan, intended to establish basic principles upon which such a scheme should be developed. It is not recommended that an area-wide plan should be implemented immediately, as it would be more appropriate for the restrictions to be introduced gradually, to respond to new development in the commercial district as it takes place. However, the restrictions on Main Street, including the elimination of parking spaces, should ideally be implemented first, in conjunction with the other proposals intended to improve safety and traffic conditions. The parking scheme should be supported by an enforcement program, which could be implemented using the sample code provided in the Montachusett Regional Planning Commission Route 12 Study.

Although the removal of some on-street parking and the restriction of parking throughout the commercial district will place more pressure on existing off-street spaces, this is unlikely to create a significant impact on overall supply. It is anticipated that additional off-street spaces will be provided in due course in the Highway Department in any event. In view of the shortage of parking in and around Cushing Academy, it is also recommended that the Academy should be encouraged to provide new parking spaces within their grounds.

5.4.4 Traffic Improvement Measures

A program of traffic and roadway improvement proposals has been developed to assist traffic flow, pedestrian safety and roadway operation. The proposals are illustrated in Figures I – IV, comprising the following:

- Proposal T1 – Upgrading of Roadway Signs.

  The following roadway signs should be upgraded:

  (i) Stop sign on Water Street approach to Main Street West (Figure I)

  (ii) Stop sign on Central Street approach to Main Street (Figure IIA)

- Proposal T2 – Installation of Stop Signs.

  Stop signs should be installed at the following locations:

  (i) Water Street approach to Main Street East – relocation of existing sign on traffic island (Figure I)

  (ii) Memorial Drive approach to Main Street (Figure IIA)

  (iii) Pleasant Street approach to Main Street (Figure III)

  (iv) Lawrence Street approach to Main Street (Figure III)

- Proposal T3 – Roadway Markings at Stop Signs.

  Stop lines should be marked on the roadway at the following locations:

  (i) Water Street approaches to Main Street East and West, including directional arrows (Figure I)

  (ii) Memorial Drive approach to Main Street (Figure IIA)

  (iii) Pleasant Street approach to Main Street (Figure III)

  (iv) Lawrence Street approach to Main Street (Figure III)

- Proposal T4 – Delineation of Traffic Island.

  The existing traffic island at the intersection of Water Street with Main Street should be properly defined. Curbing is not appropriate, as it would restrict the width of roadway available for traffic movement, and it is therefore recommended that the island be defined by painted roadway markings on the roadway surface. Reflective posts should also be installed on each corner of the island to enhance its visibility. (Figure I)

- Proposal T5 – Intersection Control Beacons.

  Traffic signal warrants do not appear to be met at present at the Central Street/Main Street intersection. It is recommended, however, that the situation should be monitored in future years to establish if increased traffic or a deteriorating accident record would justify the provision of traffic signal control. This form of control would assist the complex turning movements at the intersection.

  In the interim, a flashing intersection control beacon should be installed above the intersection, and indeed a permit already exists for this. This would warn roadway users of potential hazard, and would assist in reducing vehicle speeds on Route 12. For the same reasons, it is recommended that a permit should be secured for a similar beacon at the Water Street/Main Street intersection. (Figures I and IIA)

- Proposal T6 – Curbing at Intersections.

  Curbing should be provided at the following locations:

  (i) The southeastern corner of the Central Street/Main Street intersection adjacent to the gas station. This should be limited to the corner itself, as indicated on Figure IIA, so as not to obstruct curb-cuts to the gas station. The curbing would protect the stop sign and pedestrians

at the corner, and would also regulate to some extent the movements to and from the gas station.

(ii) A curb-cut exists to Cumberland Farms at the corner of Pleasant Street on Main Street, and this should ideally be curbed to eliminate random traffic movements at the intersection. This may require consent from the owner, but an alternative curb-cut exists further to the east on Main Street. (Figure III)

- Proposal T7 – Delineation of Sidewalks.

  As previously identified in the up-grading of existing sidewalks, two locations on Main Street require specific treatment, that is, in front of the gas station/hardware store and in front of Cumberland Farms/Pizza Restaurant. In both cases, the sidewalk is interrupted by curb-cuts, and there is extremely poor definition of the actual sidewalk area. While additional curbing cannot be provided as long as the curb-cuts exist, the sidewalk at both locations should be resurfaced and properly marked. Ideally a different surfacing material should be used, such as concrete or brick, in order to increase awareness by drivers of the presence of the sidewalk. (Figures IIA and III)

- Proposal T8 – Main Street Re-striping.

  Owing to the previously recommended elimination of on-street parking on Main Street, the available roadway space in the vicinity of Central Street and Memorial Drive should be re-striped to optimize traffic movement. A number of schemes were investigated, none of which conforms to ideal roadway layout parameters, but it is recommended that a left-turn lane for movements to Central Street and Memorial Drive should be provided. This is considered to be more advantageous than a queuing lane for the drive-in bank, as the latter would only serve cars approaching from the east.

  The proposed scheme is shown in Figure IIB, and includes the relocation of the existing cross-walk to the eastern side of the Memorial Drive intersection. Left-turn movements from Main Street West to the drive-in bank would still have to be accommodated, but it is intended that most parking lot traffic would use the Memorial Drive access. Proposal T11 suggests advisory signing in this respect.

- Proposal T9 – Parking Lot Entry Re-striping.

  Complementary to the re-striping of Main Street in Proposal T8, it is recommended that the entrance to the main parking lot from Main Street should also be carried out. As indicated in Figure IIB, this would include separation of the parking lot and drive-in bank movements by roadway striping, with directional arrows to encourage entry from the east only. A curbed island is not recommended, as this may restrict vehicular movement unduly, in particular for emergency vehicles or large vehicles which do not use Memorial Drive. A speed bump might also be installed just beyond the entry.

  As previously proposed, this access might eventually be closed completely, but even with the new arrangements on Main Street it will still be necessary to allow left turns to the access. However, the overall arrangement should at least encourage traffic destined for the parking lot to use Memorial Drive. The closure of the access appears to be the only completely effective way to deal with queuing to the drive-in bank, although keep–clear markings on Main Street might also be included, and policing of the queue should also be considered during peak times of use.

- Proposal T10 – Memorial Drive Parking Lot Access.

  The existing access to the main parking lot from Memorial Drive is very wide and poorly defined. It is recommended that this should be reduced in width and properly marked for entry and exit movements, as indicated in Figure IV.

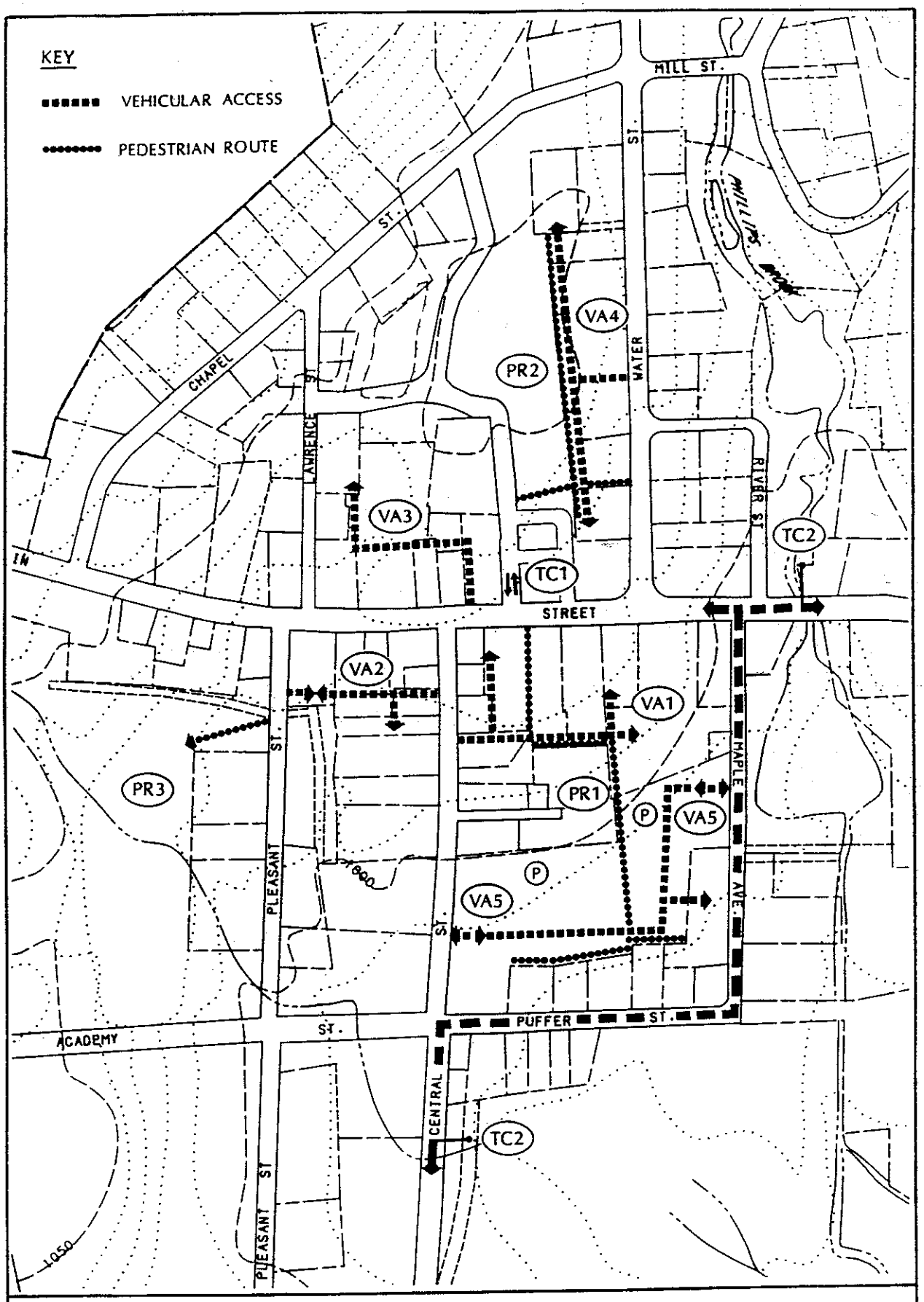
- Proposal T11 – Advisory Signing for Parking Lot.

  As already discussed, it is proposed that an advance sign should be installed on Main Street advising of entry to the parking lot at second left turn (i.e. Memorial Drive). This is indicated in Figure IIB.

- Proposal T12 – Parking Lot Layout.

  It is intended that the two-way operation on Memorial Drive will eliminate an extent of through traffic movement. Notwithstanding this, it is strongly recommended that the layout within the lot should be rationalized to minimize conflicts. A schematic layout is shown in Figure IV, which aims to define an access route for vehicles, and pedestrian linkages both through the lot and to surrounding areas. Speed bumps should be installed on the roadway to control vehicle speeds, and parking areas should be clearly defined and marked.

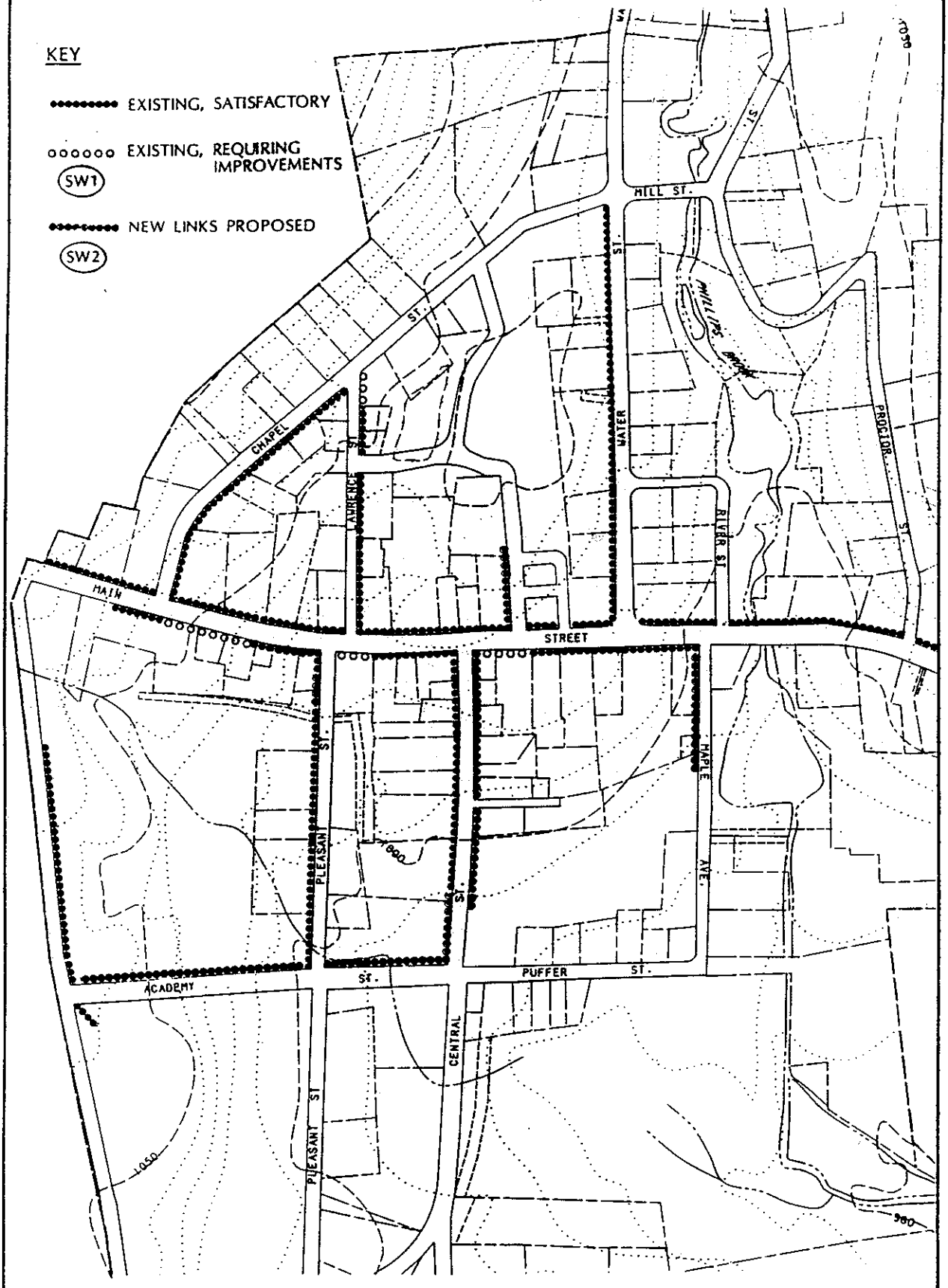
  Winchester Park is an important extension of this area, and it is recommended that the proposals contained in the City and Town Commons Grant Application should be adopted. This includes further pedestrian walkways, and the provision of additional parking areas in the vicinity of the Dolly Whitney Adams School building.



PLAN A

ASHBURNHAM DOWNTOWN PLANNING STUDY

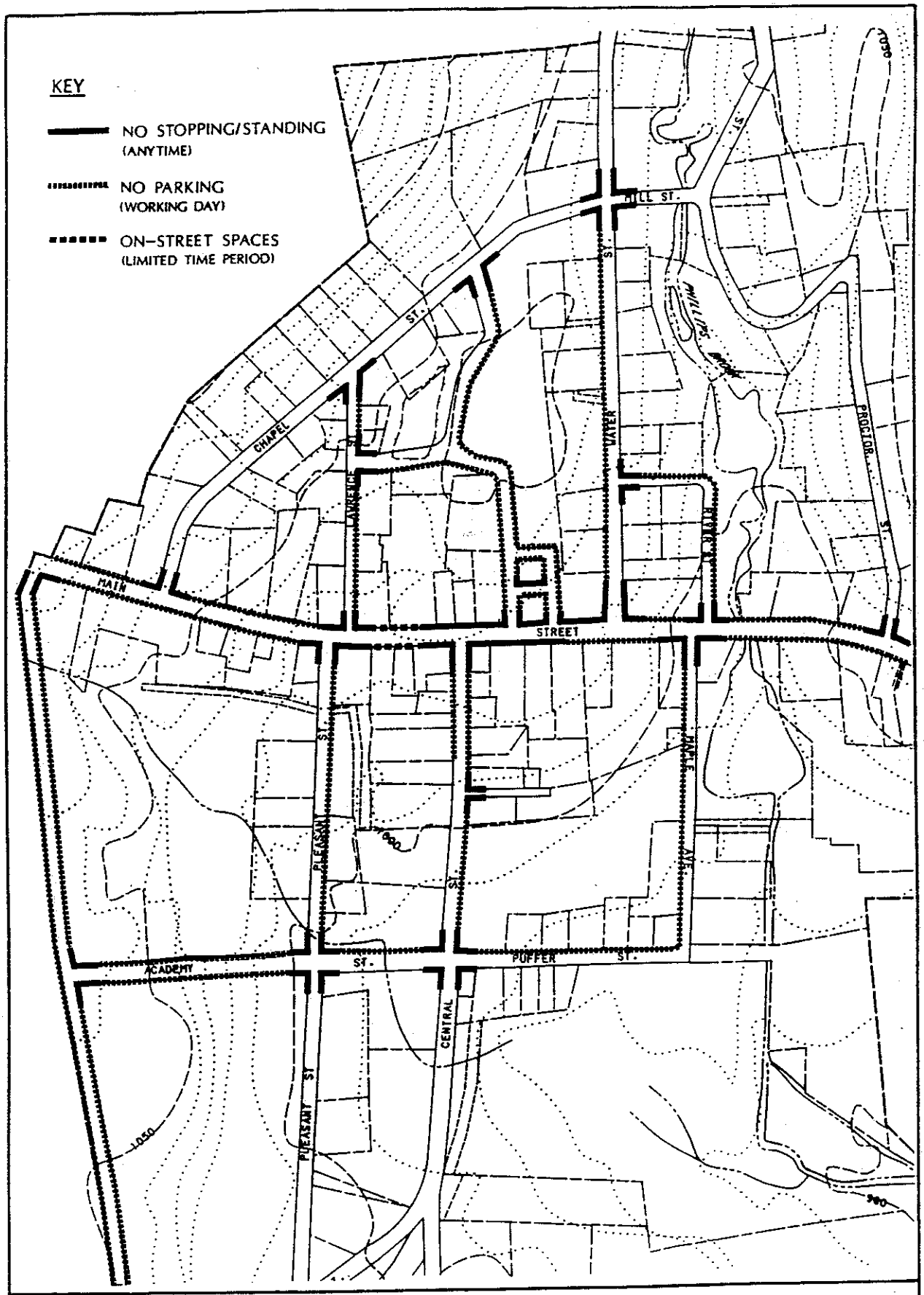
VEHICULAR AND PEDESTRIAN LINKAGE PROPOSALS



PLAN B

ASHBURNHAM DOWNTOWN PLANNING STUDY

ON-STREET SIDEWALK PROPOSALS – SW1, SW2



PLAN C

ASHBURNHAM DOWNTOWN PLANNING STUDY

PROPOSED PARKING CONTROL PLAN – P2

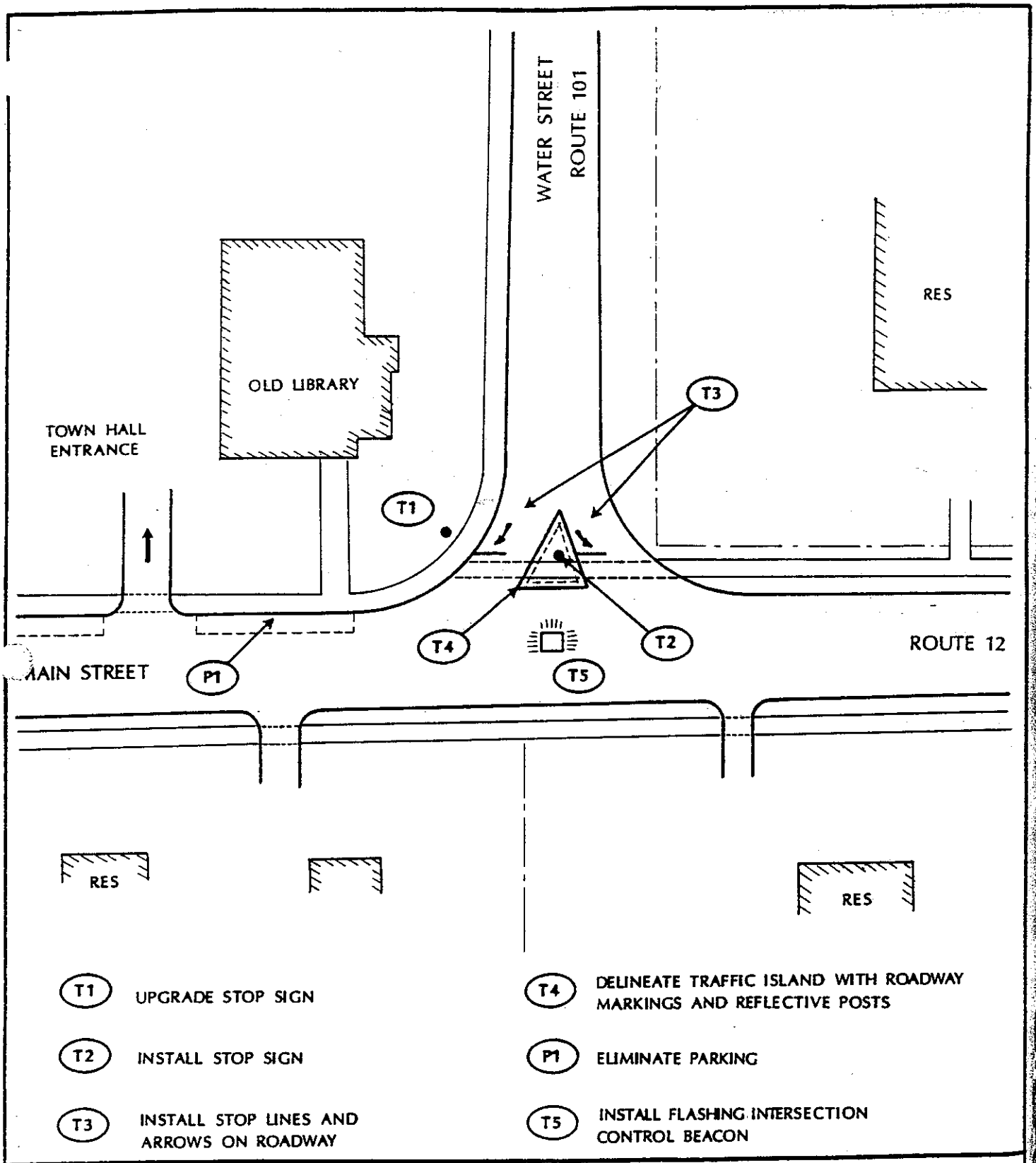


FIGURE 1

ASHBURNHAM DOWNTOWN PLANNING STUDY

TRAFFIC IMPROVEMENT PROPOSALS

NOT TO SCALE

MAIN STREET/WATER STREET

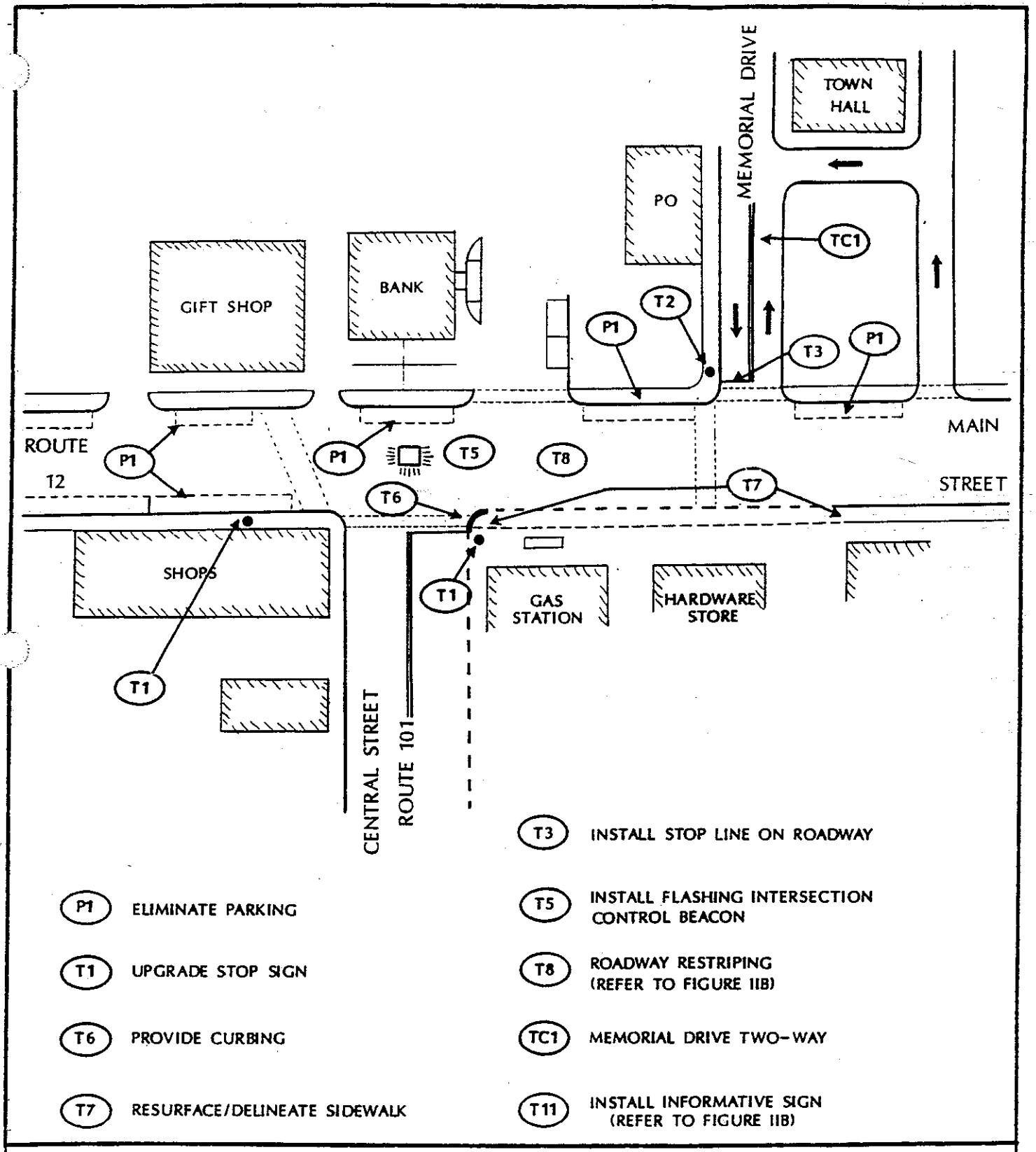


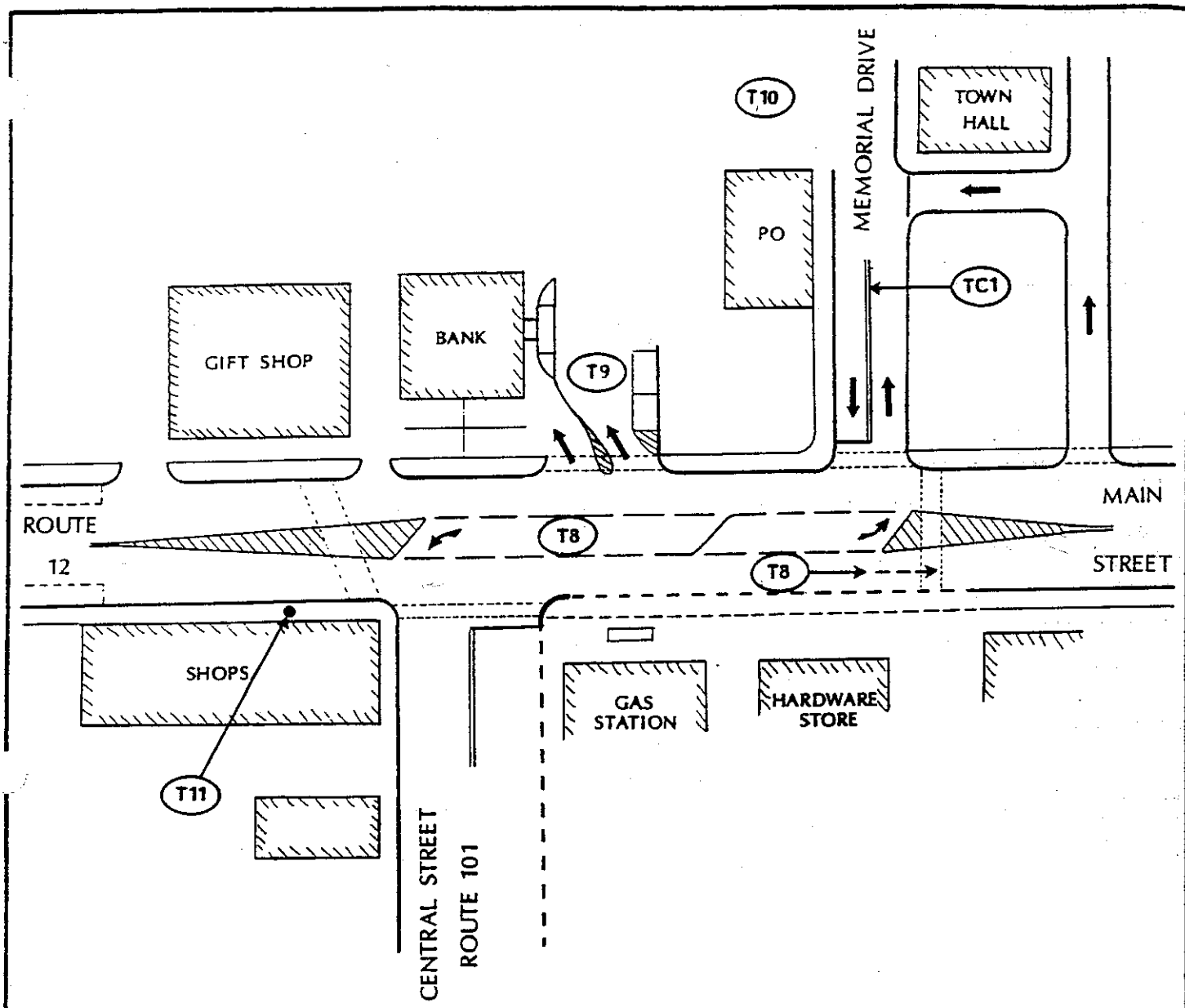
FIGURE IIA

ASHBURNHAM DOWNTOWN PLANNING STUDY

TRAFFIC IMPROVEMENT PROPOSALS

NOT TO SCALE

MAIN STREET/CENTRAL STREET



T8 RESTRIPE MAIN STREET TO PROVIDE LANE FOR LEFT TURNING TRAFFIC TO CENTRAL STREET AND MEMORIAL DRIVE

T9 STRIPE ENTRY TO BANK/PARKING LOT WITH SEPERATE LANES AND ARROWS

T11 INSTALL ADVISORY SIGN "ENTRY TO PARKING LOT – SECOND LEFT"

TC1 MEMORIAL DRIVE TWO-WAY

T8 RELOCATE CROSSWALK

T10 MODIFY PARKING LOT ENTRY/EXIT TO REDUCE WIDTH

FIGURE IIB

ASHBURNHAM DOWNTOWN PLANNING STUDY

TRAFFIC IMPROVEMENT PROPOSALS

NOT TO SCALE

MAIN STREET/CENTRAL STREET
ROADWAY RESTRIPING

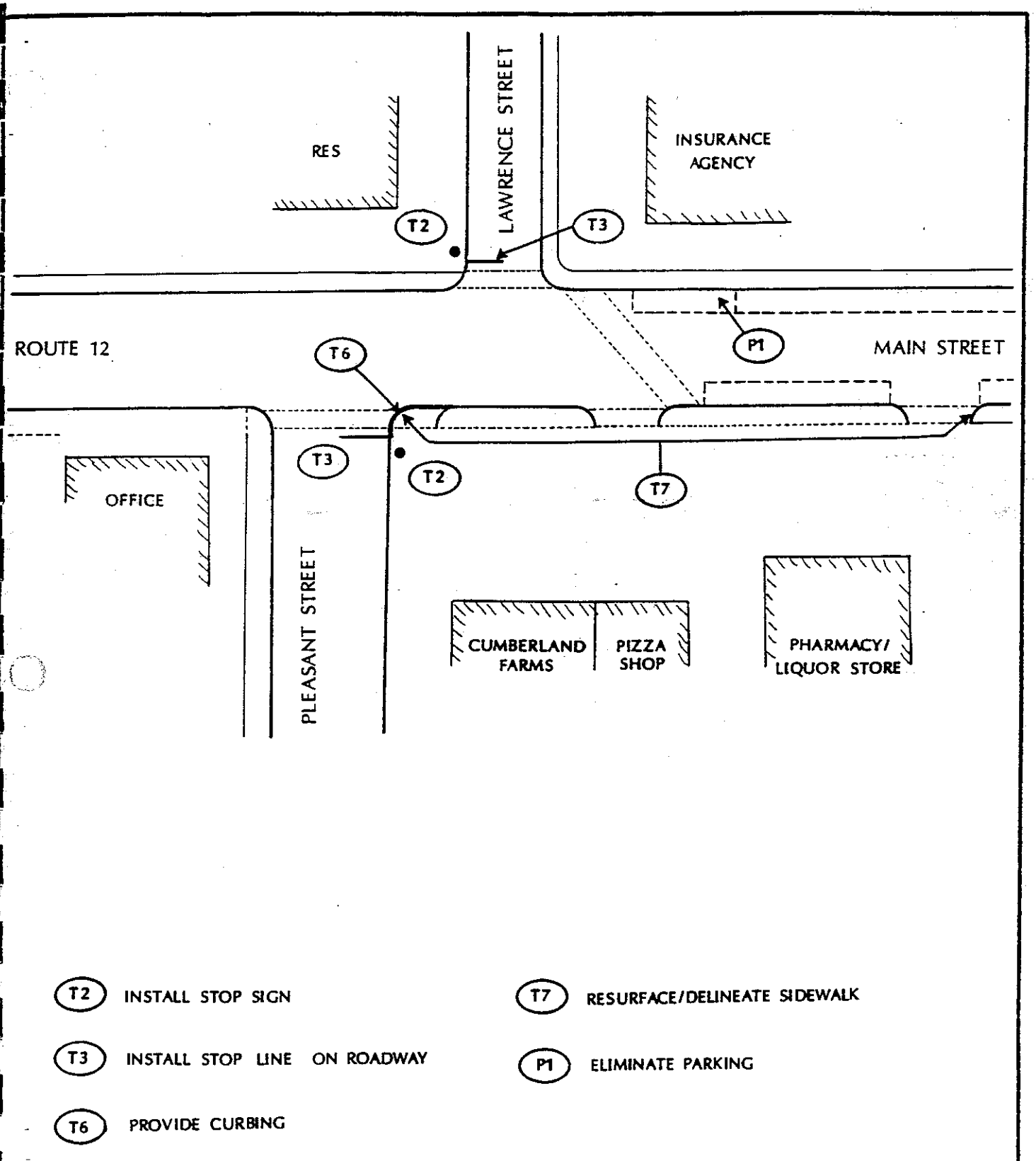


FIGURE III

ASHBURNHAM DOWNTOWN PLANNING STUDY

TRAFFIC IMPROVEMENT PROPOSALS

NOT TO SCALE

MAIN STREET/PLEASANT STREET/LAWRENCE STREET

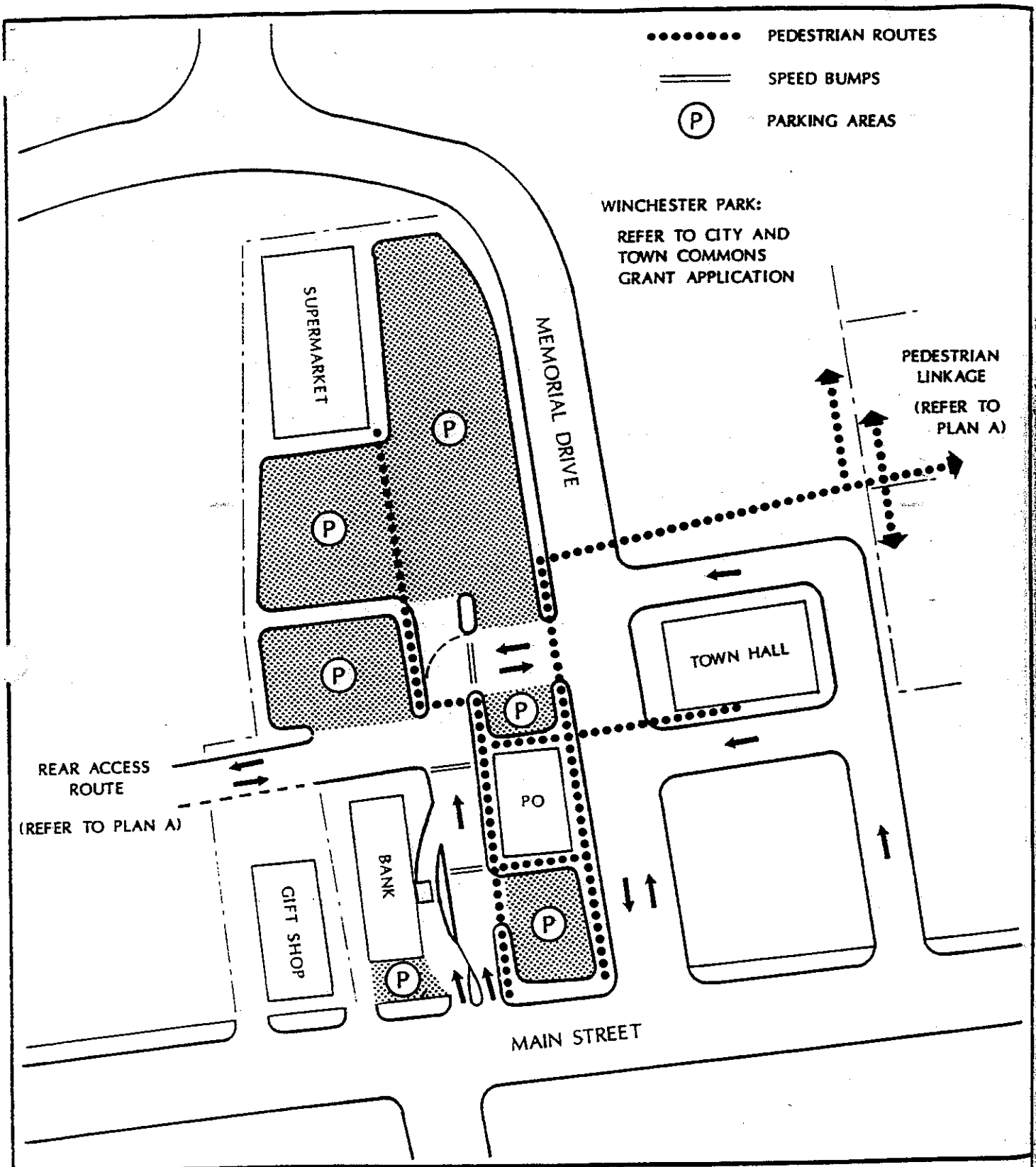


FIGURE IV

ASHBURNHAM DOWNTOWN PLANNING STUDY

TRAFFIC IMPROVEMENT PROPOSALS – T12

NOT TO SCALE

MAIN PARKING LOT – SCHEMATIC LAYOUT

CONCLUSION

This report has developed a program for Ashburnham Center based on two principal objectives of the Ashburnham Planning Board: first, to encourage the economic revitalization of the downtown area by facilitating the expansion of business activity that is in harmony with the historic character of the Center; and second, to protect the environmental and historic qualities of the downtown area from further degradation due to inappropriate types of development and to overloading of the area's soils from septic system discharges. Because of the characteristics of soils and ground water in the downtown area, the sewage disposal issue is the major obstacle to business expansion in Ashburnham Center. The Town is studying the possibility of addressing this problem through the construction of a municipal sewerage system; however, such a solution appears not to be imminent, primarily because federal, state and local funding for construction of sewerage systems is so limited at present.

Therefore, the recommended land use regulatory program for Ashburnham Center must be implemented in two phases. The first phase can include all recommended zoning amendments which do not permit increased development density: i.e., all changes other than the reductions in minimum lot area and increases in maximum building coverage recommended for the three proposed new zoning districts. Once a feasible and acceptable solution for sewage disposal is identified, the Planning Board will then be able to move ahead with the zoning amendments permitting additional development density. However, it must be noted that without these final amendments, the regulatory changes may have little impact, since so many parcels in Ashburnham Center do not conform to current regulations regarding lot area and building coverage.

INTERVIEWS AND MEETINGS

During the data collection and analysis phase of the Downtown Planning Study, the project team met with several individuals and groups to discuss issues and activities in the Town. These meetings are listed below, including dates and issues discussed.

Town of Ashburnham

Mark Rees, Town Administrator; 28 November 1988.

- Septic problems, sewer studies
- Parking issues
- Facility reuse study
- Cushing Academy
- Post Office relocation

Christina Sargent, Chairperson, Ashburnham Historic Commission; 28 November 1988.

- Historic properties survey and planning project
- City and Town Commons grant application

Ronald Laplante, Police Chief; 29 December 1988.

- Traffic circulation and safety
- Parking

Stephen N. Foley, Fire Chief; 22 December 1988.

- Traffic circulation

William Brennan, Jr., Highway Superintendent; 1 December 1988.

- Traffic, roadway and parking issues

Larry Murphy, Health Agent, Nashoba Associated Boards of Health; 27 October 1988.

- Septic system failures

Cushing Academy

Ray Lemieux, Director of Plant and Property; 28 November 1988

- Sewage treatment plant
- Expansion prospects

Business Community

Ashburnham Business Council, membership meeting, 13 December 1988.

Attendance:
Chris Bornstein, Country Cross Stitch
Gil Carreiro, Newton Carrere & Assoc.
Alan Couturier, Mt. Vernon Food Mart
Maurice Couturier, Mt. Vernon Food Mart
Edmund Frederick, E. Frederick 19th Cent. Pianos
Haig Haroutunian, Haig's Variety Store
Raymond Marsan, R.E.M. Hearing Aid Service
Charles Ragsdale, Ashburnham Direct Mail Service
Carol Raynor, German Variety & Delicatessen
Brian R. Roy, Roy's Auto Repair
Janice Roy, Roy's Auto Repair
R. Lincoln Stiles, Stiles Super Scoops/Rental Units
Valerie Sibley, Northland Engineers

- Traffic problems and possible solutions
- Parking problems and possible solutions
- Surface water (storm drainage)
- Septic problems
- Land use change
- Zoning district boundaries and standards

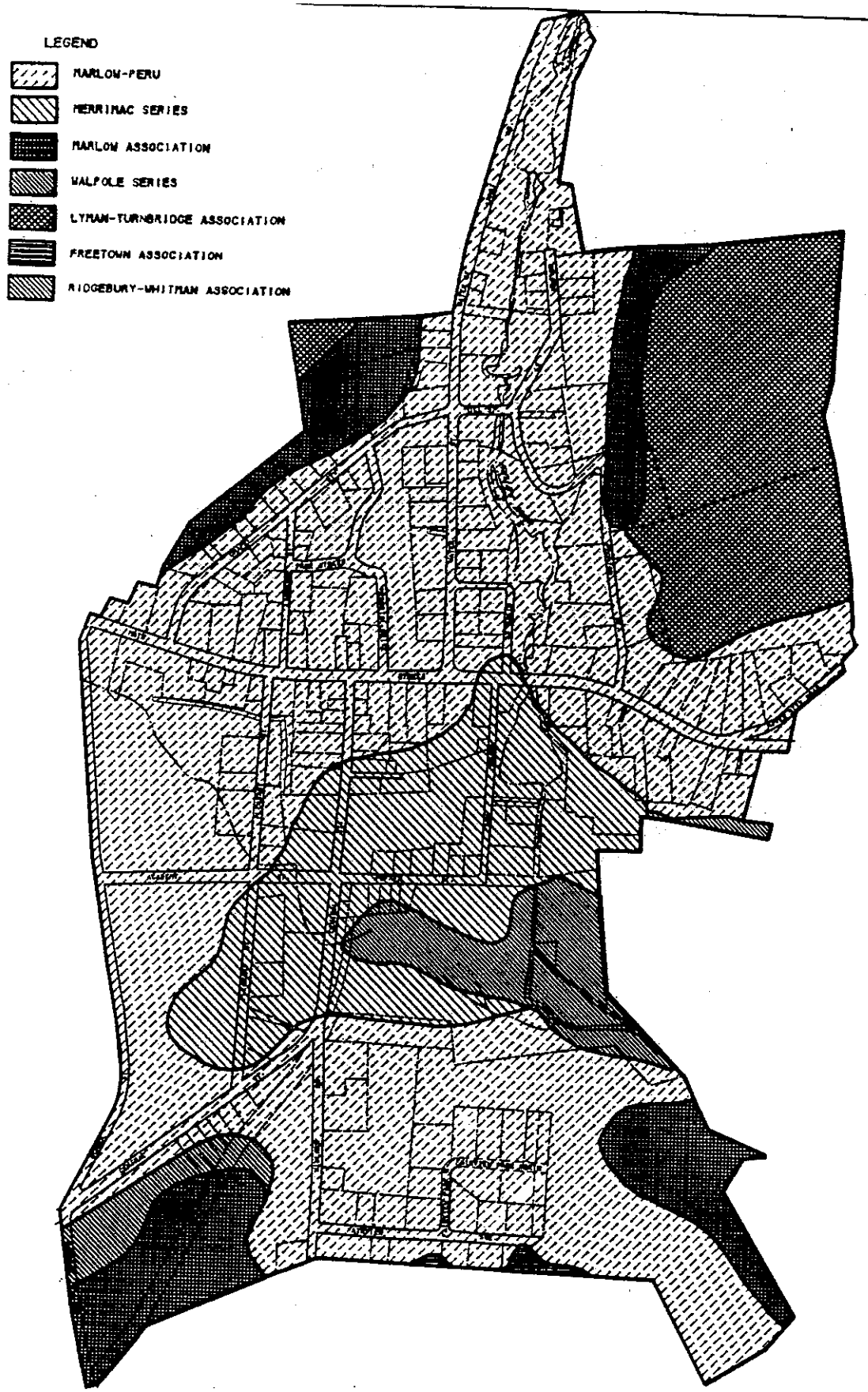
Maurice Couturier, Mt. Vernon Food Mart; 21 December 1988.

- Parking lot operation and problems
- General traffic difficulties

Other

Brad Harris, Montachusett Regional Planing Commission; 6 December 1988.

- Traffic surveys
- Traffic growth rates



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

SOILS MAP

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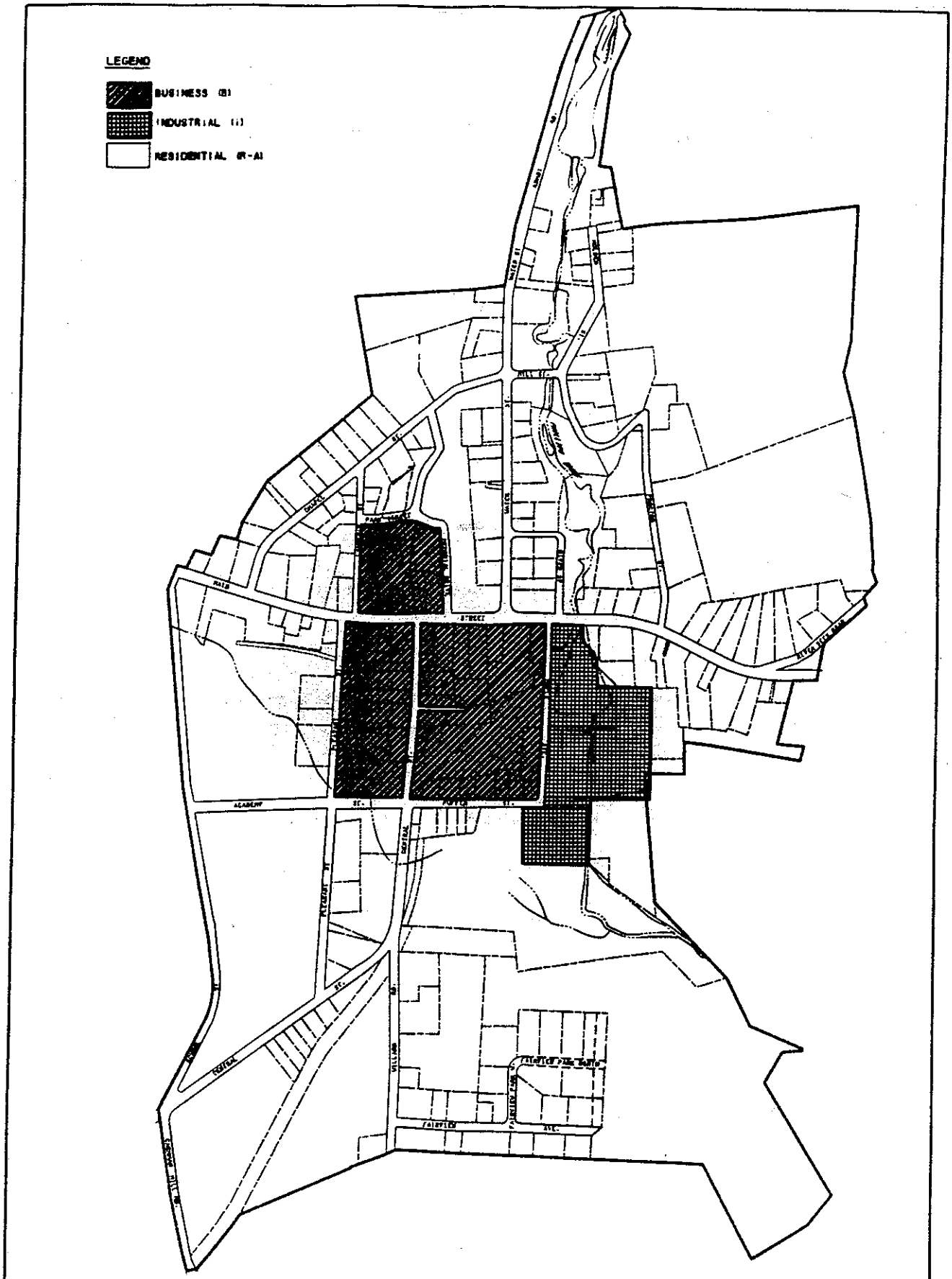
SCALE 1"=300'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S TOPOGRAPHIC QUADRANGLE.
USDA SOILS MAP. ASHBURNHAM.

TAMS



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

EXISTING ZONING

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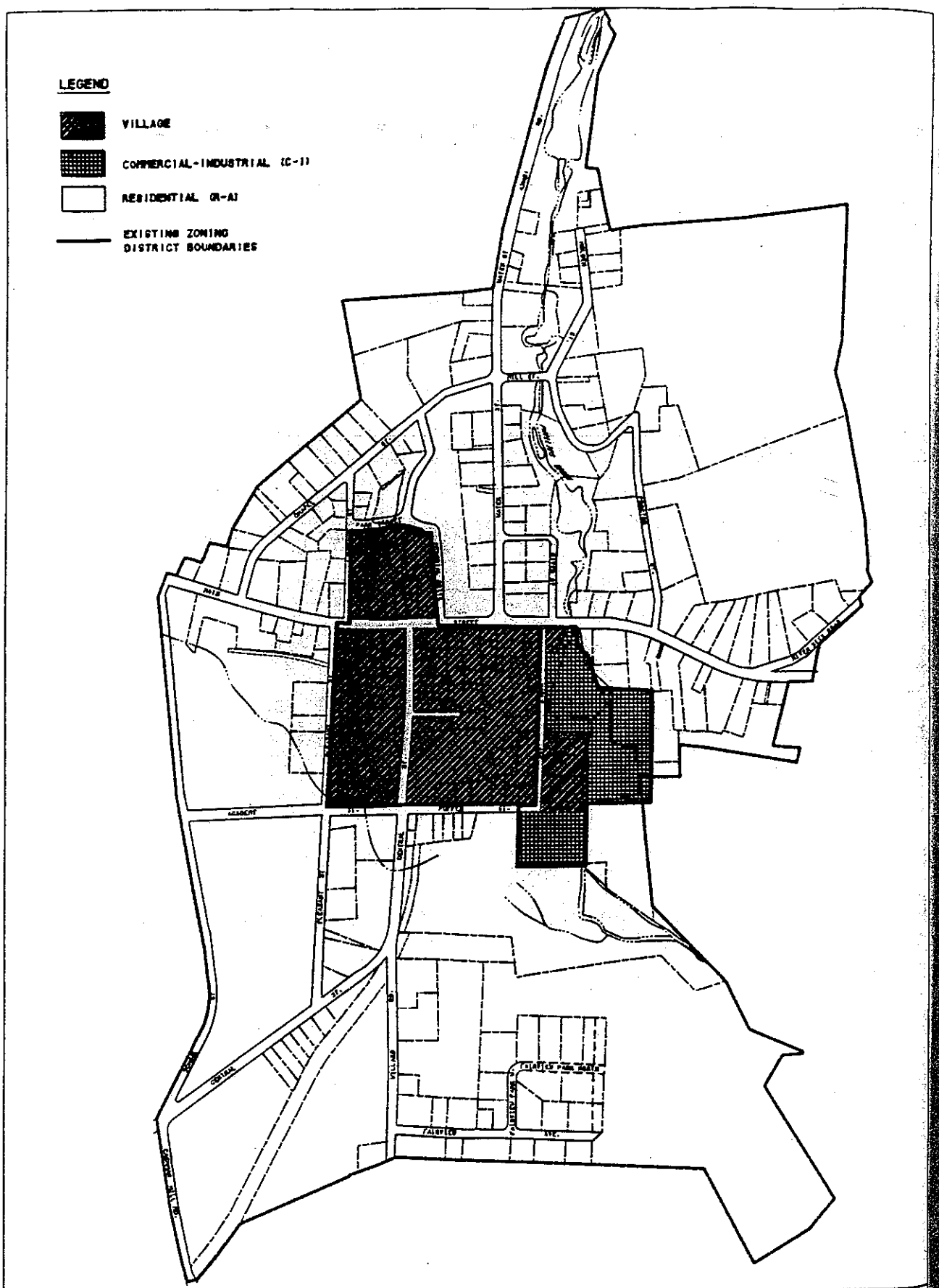
SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

IEP, Inc.
TAMS



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

"VILLAGE" ZONING

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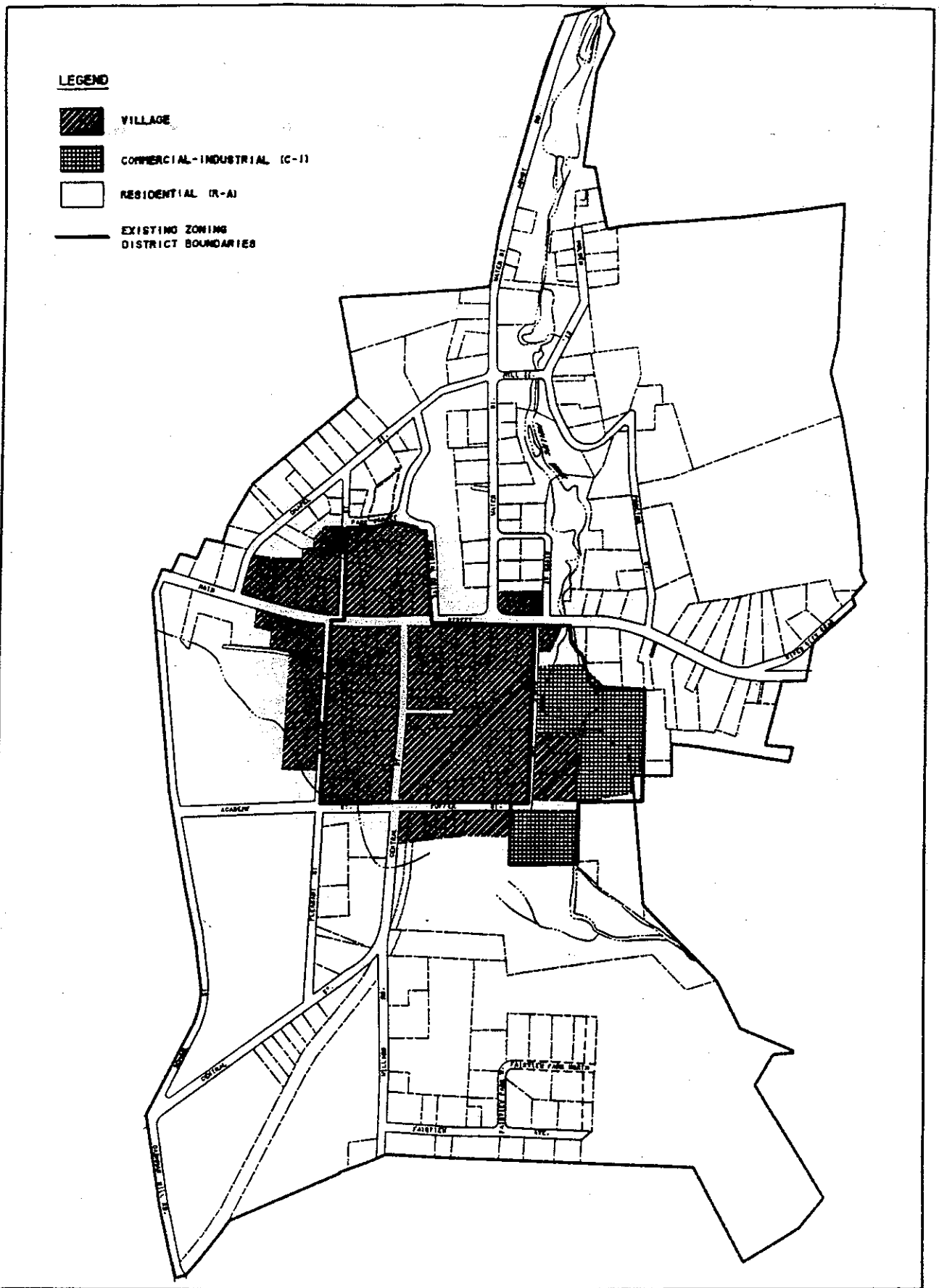
SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

IEP Inc.
TAMS



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

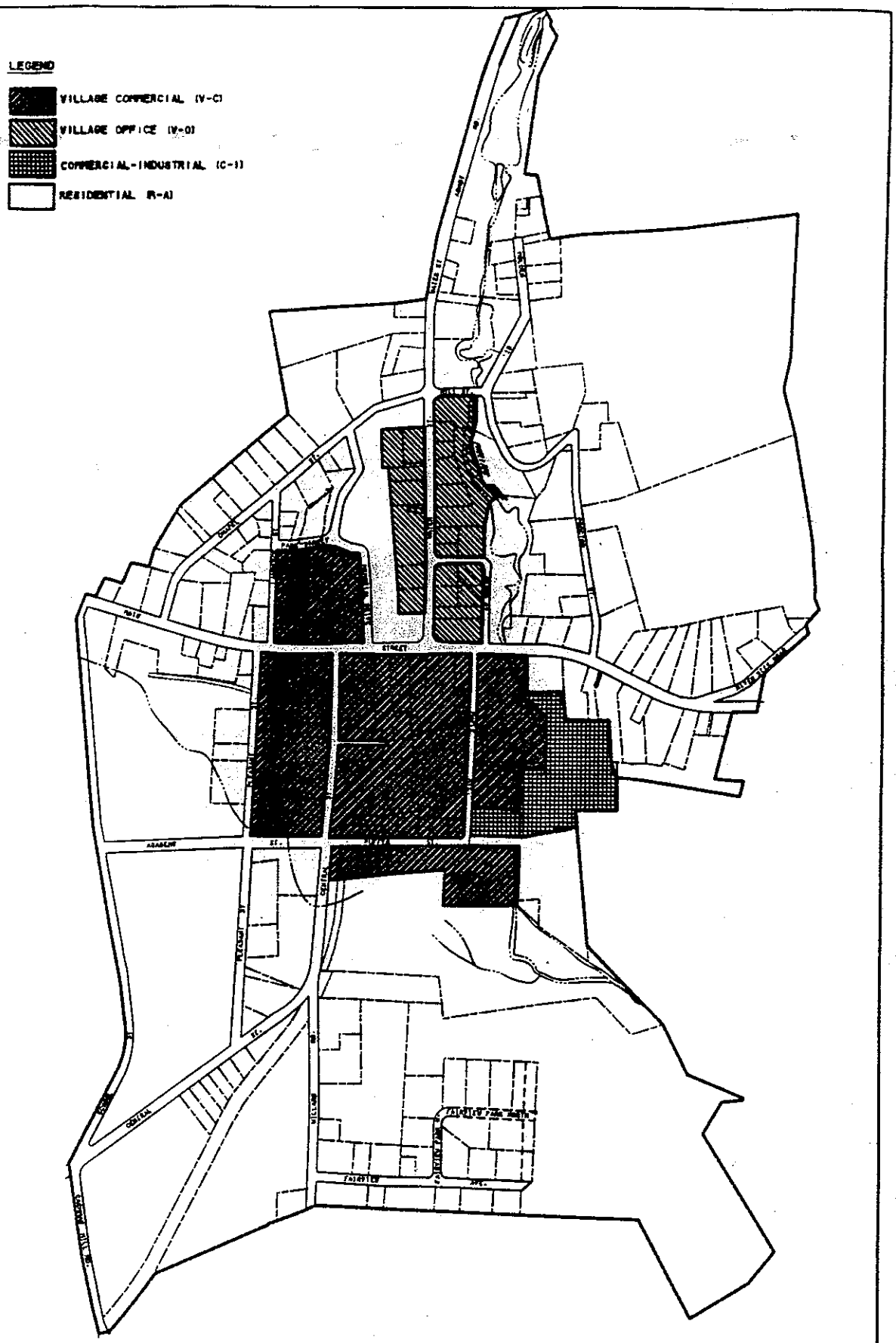
EXPANDED "VILLAGE" ZONING

SCALE 1"=400'

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

SOURCES: ASHBURNHAM ASSESSORS MAPS. U.S.G.S. TOPOGRAPHIC QUADRANGLE.

TAMS



ASHBURNHAM DOWNTOWN PLANNING STUDY
1989
PREFERRED DEVELOPMENT PATTERN

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

TAMS

PUBLIC INFORMATIONAL MEETING

15 June 1989

ASHBURNHAM DOWNTOWN PLANNING STUDY

Prepared For:

Ashburnham Planning Board
Land Use Office – Town Hall
Ashburnham, Massachusetts 01430

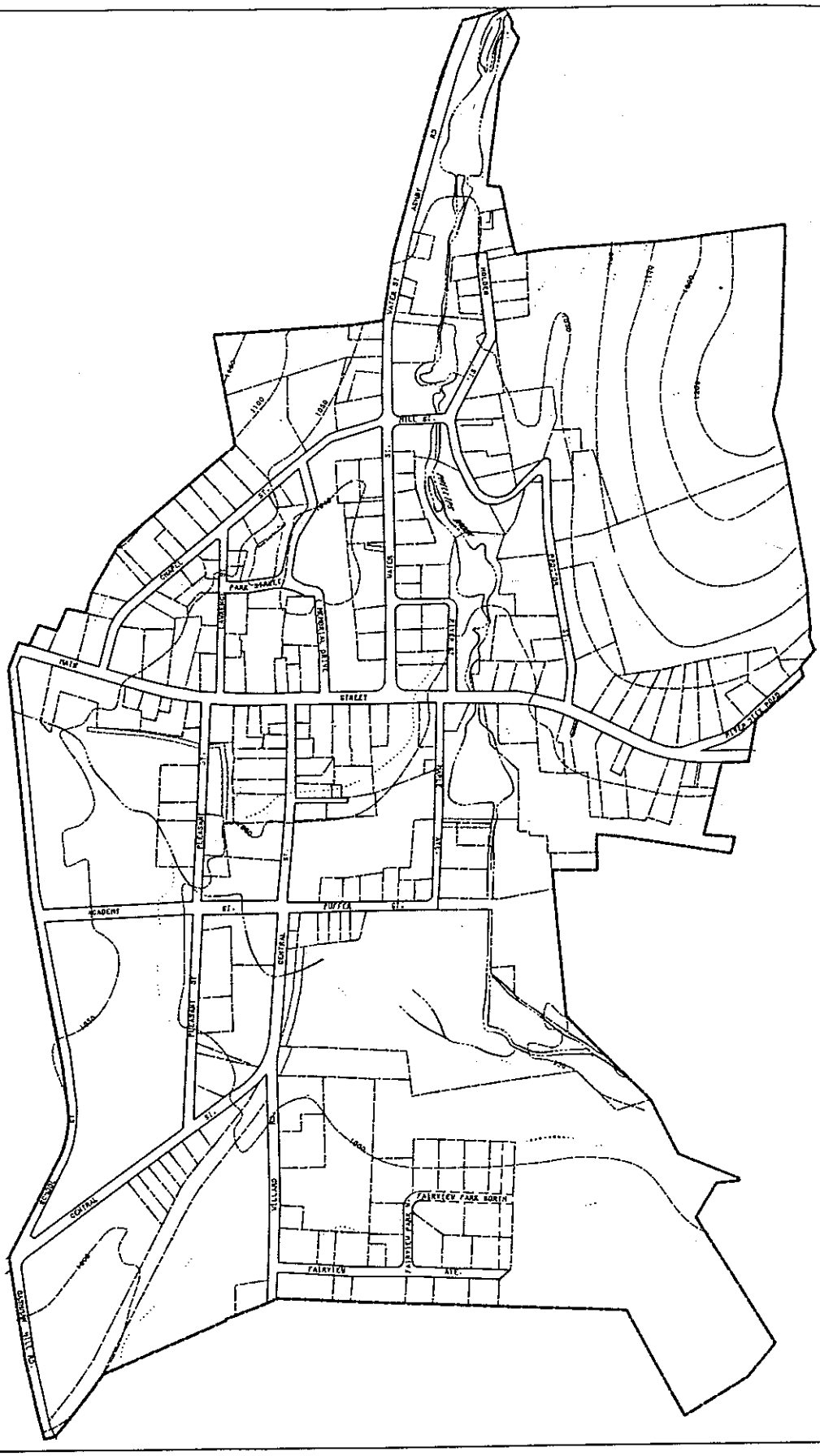
Prepared By:

IEP, Inc.
6 Maple Street – P.O. Box 780
Northborough, Massachusetts 01532

and

TAMS Consultants, Inc.
38 Chauncy Street – Suite 1200
Boston, Massachusetts 02111

This project was funded through a Strategic Planning Grant
Awarded by
The Massachusetts Executive Office of Communities and Development



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

STUDY AREA

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

0 200 400 600 Feet

SCALE 1"=200'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

IEP Inc.
TAMS

ACTION PLAN SUMMARY

LAND USE REGULATION (ZONING)

1. Establishment of "Village Commercial" Zoning District

- Replace existing Business district in the Ashburnham Center area
- Use regulations
- Dimensional regulations
- Special regulations for off-street parking

2. Establishment of "Village Office" Zoning District

- Apply to area along Water Street, currently zoned R-A
- Permit conversion of residential structures to office use
- Strict design, parking and screening requirements
- Dimensional regulations
- Option for special off-street parking regulations

3. Establishment of "Commercial-Industrial" Zoning District

- Replace existing Industrial district in Ashburnham Center area
- Use regulations
- Dimensional regulations

4. Revisions to Sign Regulations

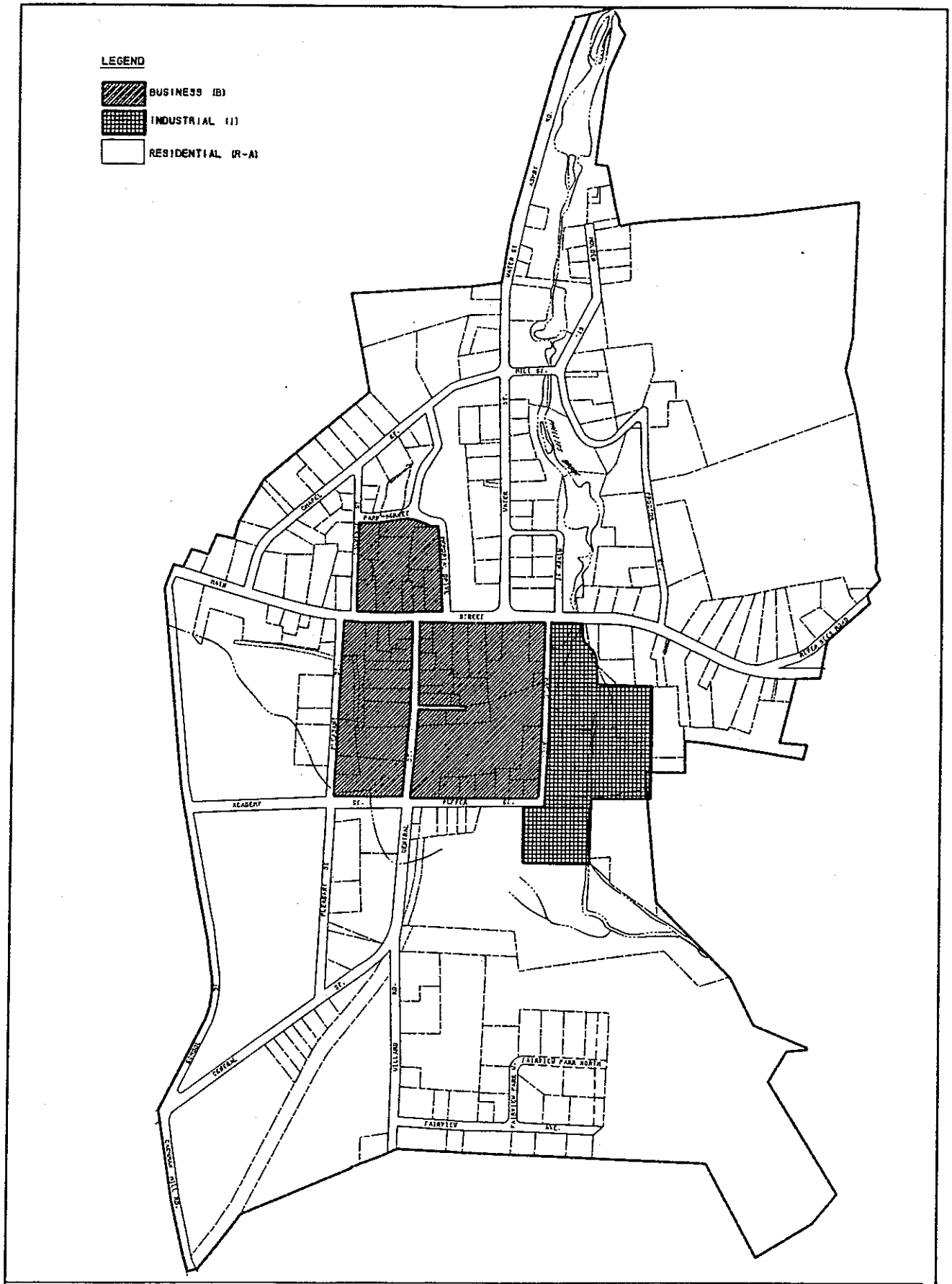
- Special regulations for Village Commercial and Village Office districts
- Reductions in number and area of signs
- Controls on design of signs

5. Revisions to Off-Street Parking Requirements

- Reduction in number of required spaces for many uses

6. Revisions to Site Plan Review Process

- Special requirements for Village Commercial and Village Office districts
- Standards for circulation and parking design
- Limited design review for buildings



ASHBURNHAM DOWNTOWN PLANNING STUDY

1989

EXISTING ZONING

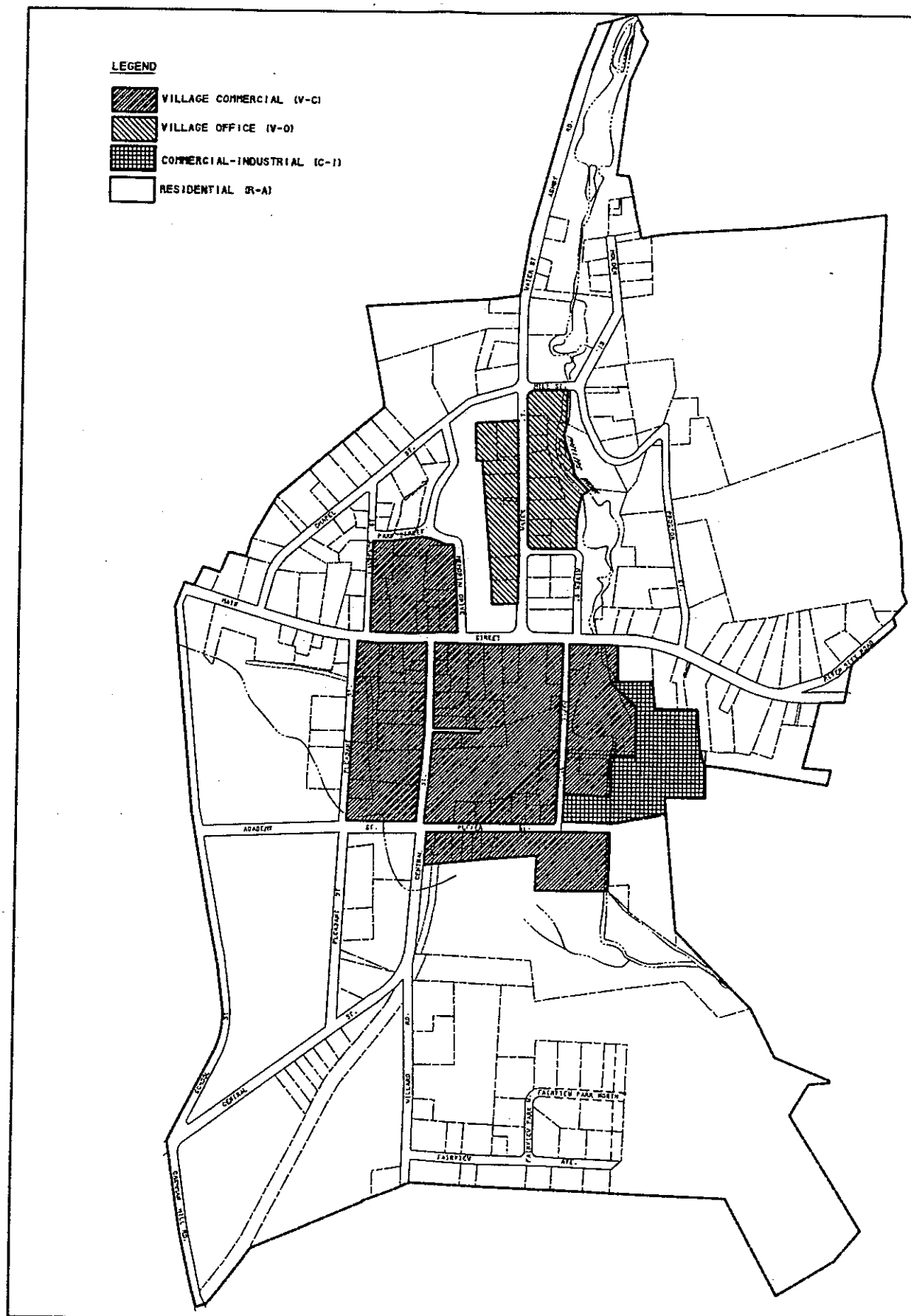
THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

0 200 400 800 feet

SCALE 1"=400'

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

IEP, INC.
TAMS



ASHBURNHAM DOWNTOWN PLANNING STUDY
1989
PREFERRED DEVELOPMENT PATTERN

THIS PROJECT WAS FUNDED THROUGH A STRATEGIC PLANNING GRANT AWARDED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT

SOURCES: ASHBURNHAM ASSESSORS MAPS.
U.S.G.S. TOPOGRAPHIC QUADRANGLE.

IEP Inc.
TAMS

TRANSPORTATION AND PARKING

1. VEHICULAR AND PEDESTRIAN LINKAGES

(a) Rear Access Routes

- VA1 – Rear access to Main Street lots, east of Central Street.
- VA2 – Rear access to Main Street lots, west of Central Street.
- VA3 – Rear access to Main Street lots, east of Lawrence Street.
- VA4 – Rear access to lots on west side of Water Street.

(b) Vehicular Access to the Highway Department Site

- VA5 – Highway Department Site Access.

(c) Pedestrian Routes

- PR1 – Pedestrian linkage to Highway Department Site.
- PR2 – Pedestrian linkage to Water Street.
- PR3 – Pedestrian linkage to Cushing Academy.

(d) On-Street Sidewalk Network

- SW1 – Upgrading of sidewalks.
- SW2 – New sidewalk links.

2. TRAFFIC CIRCULATION

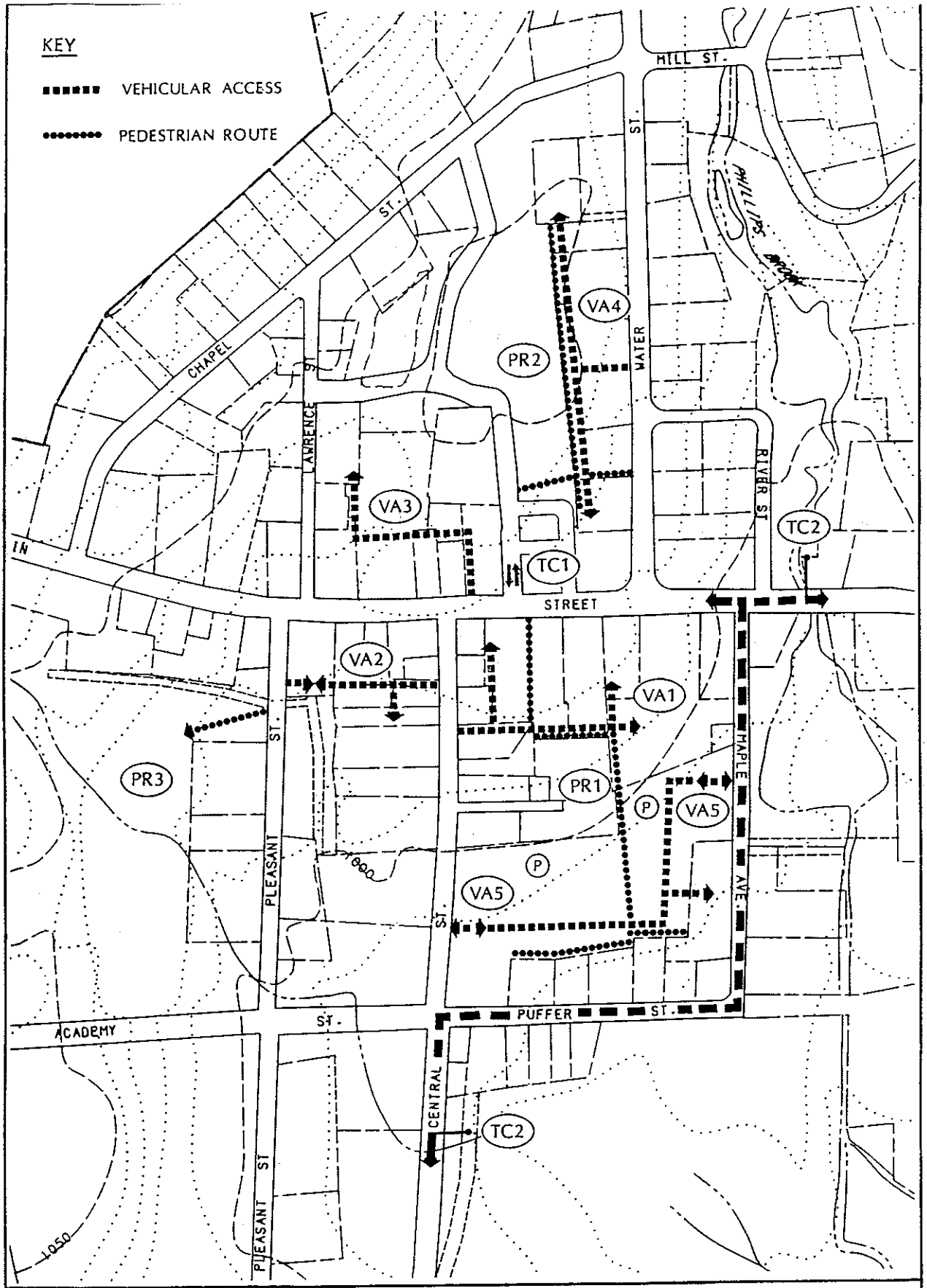
- TC1 – Two-way Traffic Operation on Memorial Drive.
- TC2 – Alternative Route via Puffer Street/Maple Avenue.

3. PARKING

- P1 – Elimination of On-street Parking at Selected Locations.
- P2 – Parking Control and Enforcement Policy.

4. TRAFFIC IMPROVEMENT MEASURES

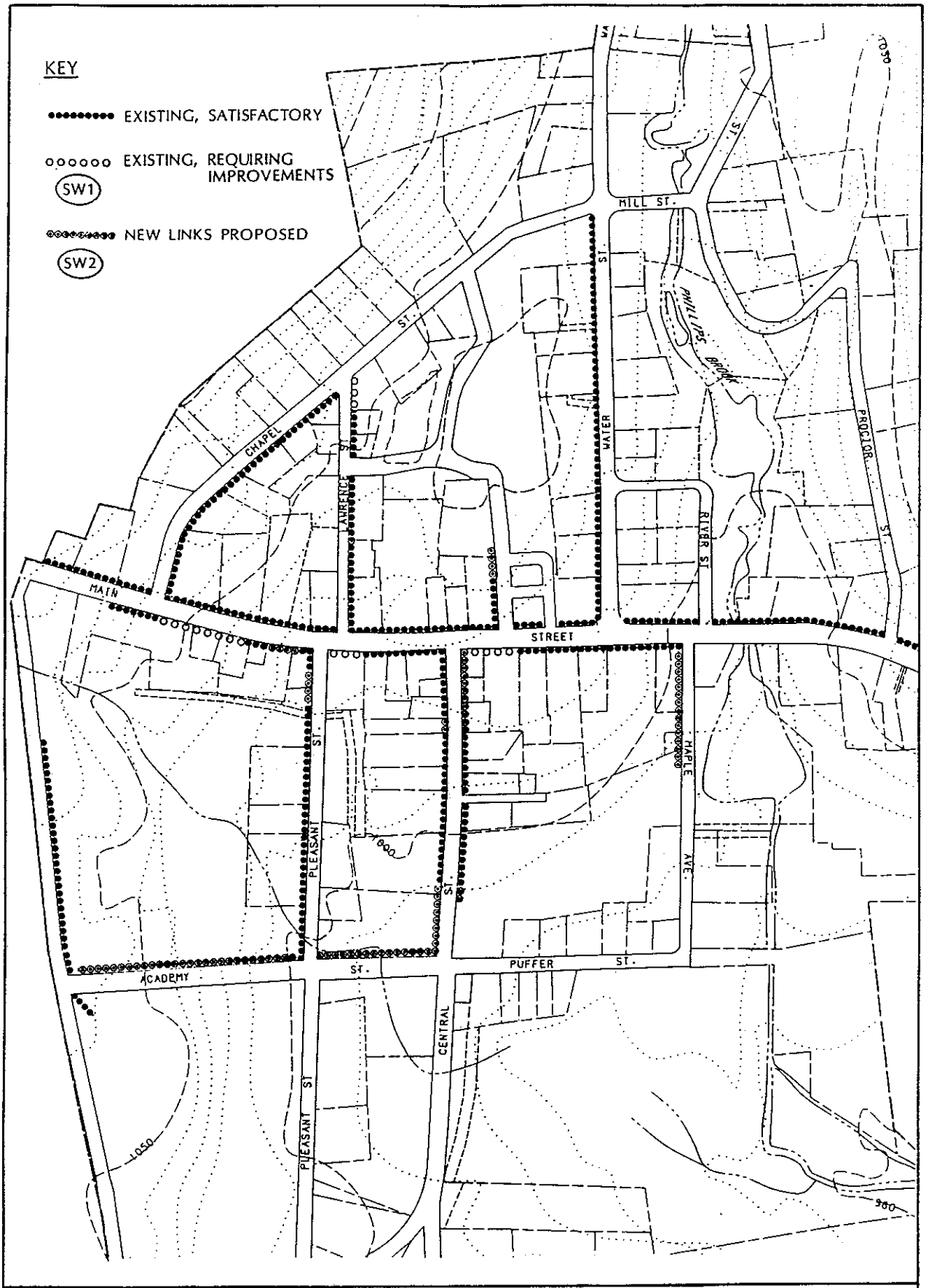
- T1 – Upgrading of Roadway Signs.
- T2 – Installation of Stop Signs.
- T3 – Roadway Markings at Stop Signs.
- T4 – Delineation of Traffic Island.
- T5 – Intersection Control Beacons.
- T6 – Curbing at Intersections.
- T7 – Delineation of Sidewalks.
- T8 – Main Street Re-striping.
- T9 – Parking Lot Entry Re-striping.
- T10 – Memorial Drive Parking Lot Access.
- T11 – Advisory Signing for Parking Lot.
- T12 – Parking Lot Layout.



PLAN A

ASHBURNHAM DOWNTOWN PLANNING STUDY

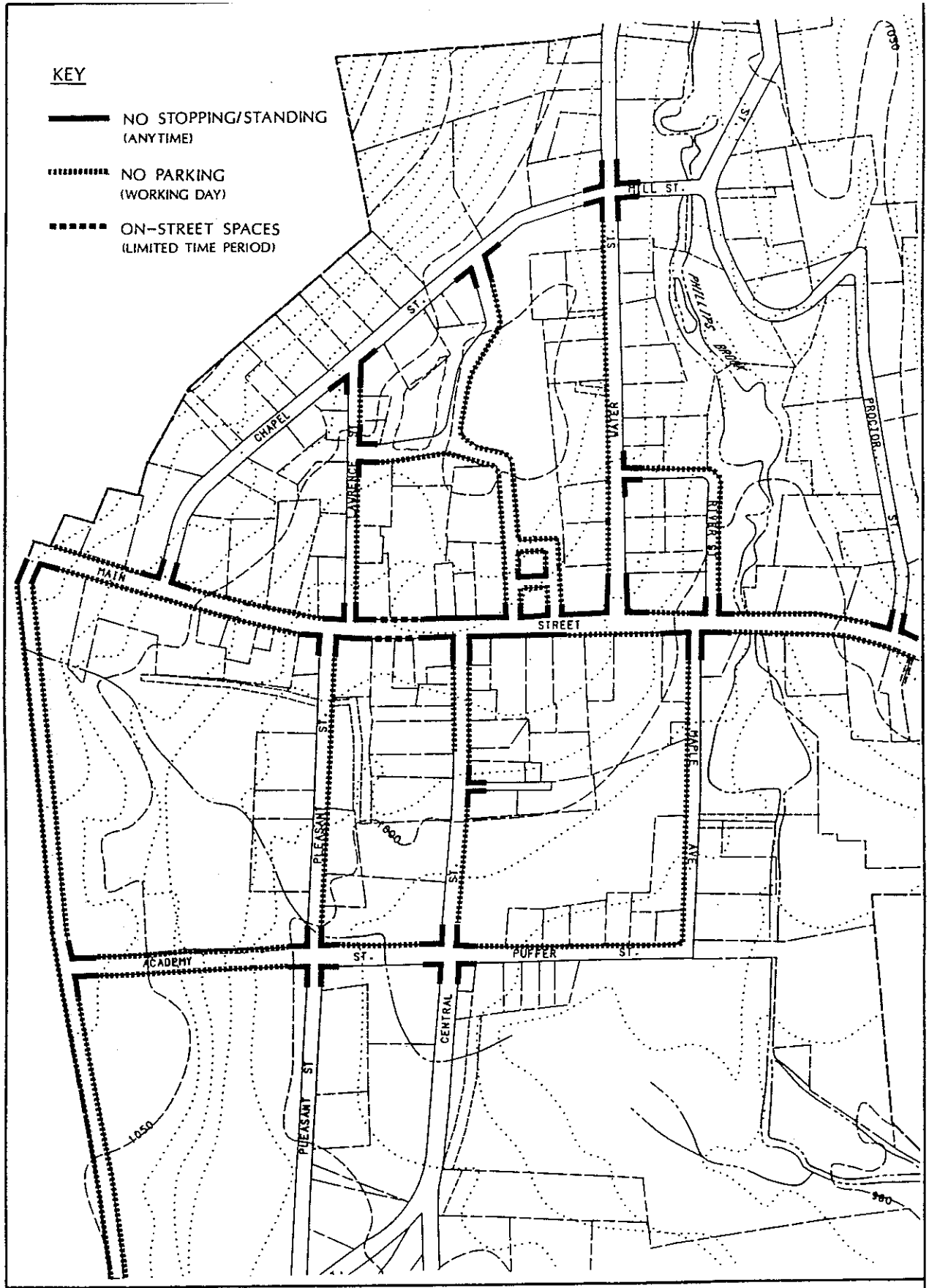
VEHICULAR AND PEDESTRIAN LINKAGE PROPOSALS



PLAN B

ASHBURNHAM DOWNTOWN PLANNING STUDY

ON–STREET SIDEWALK PROPOSALS – SW1, SW2



PLAN C

ASHBURNHAM DOWNTOWN PLANNING STUDY

PROPOSED PARKING CONTROL PLAN – P2

Town Administrator

DIRECTIONS FOR THE DOWNTOWN

POLICIES AND OBJECTIVES PLAN FOR ASHBURNHAM'S CENTER

A Planning Report Prepared by
The Ashburnham Downtown Planning Task Force
and LandUse, Incorporated

MAY 1988

LandUse, Inc.
P.O. Box 317 — Hadley, Massachusetts 01035 — (413) 584-9951

ASHBURNHAM DOWNTOWN PLANNING PROJECT
GOALS AND OBJECTIVES PLAN

TABLE OF CONTENTS

I. INTRODUCTION TO THE GOALS AND OBJECTIVES PLAN

WHY IS A DOWNTOWN PLAN NEEDED IN ASHBURNHAM?

Ashburnham has a history of treasuring and using its downtown. Town residents faithfully patronize businesses located in the downtown, and the result is a bustling and successful group of businesses that are making the most of the space available to them. In addition to year-round residents, a fair amount of service comes from the summer residents, who double the town's population, and from Cushing Academy students. Therefore, despite the Town's small population, local businesses have thrived in their downtown locations. So what's the problem?

According to town residents and business owners in the downtown on the Downtown Planning Task Force, there are several problems, including:

- The traffic flow in the Gardner Savings Bank area must be improved.
- The Route 101/Route 12 intersection needs work to make it safer and clearer as to how the traffic should be moving.
- Street parking along Route 12 causes problems at peak hours.
- There is a need for improvement of the traffic flow within the downtown.
- There is a need for more parking spaces, but those spaces must be conveniently located.
- The new Town Library creates a new center of gravity for the downtown in that there are more reasons for people to go behind Town Hall.
- The traffic flow in and out of the Cumberland Farms site causes problems for cars and pedestrians.
- There is a need for physical improvements in the downtown such as fixing sidewalks and painting in lines for parking spaces.

The problem is, in a nutshell, that "the use has outgrown the system". Traffic and parking patterns and regulations have not changed in the last forty years, despite the fact that traffic has steadily increased. Inadequate land use regulations, including review of plans for new businesses, have resulted in new development that makes the already bad parking and traffic situation worse. Part of the problem is simply the volume of traffic that passes through town at

certain times. This volume is due in part to the popularity of the businesses in town, and partially to the necessity of using the state roads (Route 12, Route 101), which run through Ashburnham's center. Whatever the cause, the situation has reached the point where Ashburnham residents know that they must take action, or their downtown will deteriorate as people seek more convenient service elsewhere.

THE DOWNTOWN PLANNING PROJECT

The action that Ashburnham residents took was to set aside $7000 at Town Meeting to fund a preliminary study of the downtown. The Town chose LandUse, Incorporated to prepare the downtown study. The Board of Selectmen formed a Downtown Planning Task Force, composed of town officials, local business people, and concerned citizens to work with LandUse on the project.

The downtown planning project is broken down into two parts:

Part I: Prioritization of Major Problems in the Downtown

The first part of the project lasted approximately six weeks. The goal of the first part was to identify the major issues related to the downtown, and identify those issues that required further and immediate study or work. The Downtown Task Force met twice with LandUse to identify these issues and begin to think specifically about solutions to the problems. The next step was a Workshop on the Downtown, to which all town residents received a written invitation. The focus of the Workshop was to discuss the importance of the issues that had been identified in the previous meetings. In addition, the Workshop was a chance to receive public input into the prioritization of the issues and their possible resolutions. This Policy and Objectives Plan is the result of Part I of the project.

Part II: Grant Application for Further Study of Issues

In early May, 1988, the Downtown Planning Task Force concluded this second part of the project. The Task Force knew that it would not be able to receive adequate funding from the town to continue with the necessary work, but did not want to lose the momentum of the work that has been done to identify the priority issues. Armed with the important information derived in Part I, the Task Force has applied for Strategic Grant funding to pursue the issues identified in Section IV of this Plan as being critical to the improvement of Ashburnham's downtown.

WHAT IS INCLUDED IN THE PLAN

The goal of the Plan is to look at the issues related to the downtown, and identify those that are of critical importance to the downtown's well-being.

Section I discusses the factors that have brought about the need for a Downtown Plan.

Section II summarizes the general policies to guide future downtown planning. These policies are in answer to the major concerns voiced during the project.

Section III explains the specific objectives that must be studied or implemented in order to meet the policies listed in Section II.

Section IV details the prioritization process by which the most important objectives, those that were of most immediate concern to the town, were derived.

II. POLICIES TO GUIDE FUTURE DOWNTOWN PLANNING

The following general policy statements result from the discussions with the Downtown Task Force and LandUse observations on what must be done to solve the problems of the downtown. These policies provide the framework for the recommendations listed in the Objectives section, and will be instrumental in determining future downtown planning objectives.

1. **All the players must be represented in both the planning, implementation, and administration phases of downtown planning.** Downtown landowners, local business people, town officials, the regional planning agency, and concerned citizens must combine to make the planning process truly representative and successful.

2. **Safety should take precedence over convenience in traffic and parking decisions.** For example, curb cuts along Main Street must be minimized and located an appropriate distance from intersections, on-street parking spaces must be restricted. In addition, handicapped access is another issue that must be addressed.

3. **The traffic flow throughout the entire downtown area must be improved. In particular, the Central St./Main St., Pleasant St./North St., and Main St./School St. intersections are of critical concern.**

4. **On-site traffic flow for properties within the downtown must be improved. Areas of critical concern are the Pleasant St./Main St. corner, the New Library, the Bank/Post Office business area.**

5. **Encourage additional parking areas to alleviate the dangerous congestion caused by inadequate on- and off-street parking opportunities.**

6. **Determine the optimal use of town-owned land in the downtown.**

7. **Expand a network of pedestrian paths within the downtown.**

8. **Encourage a more cohesive downtown by linking all its various parts -- streets, pathways, open spaces, signs, lighting and buildings.**

9. **Ensure that a process is created to continue planning for the downtown in the future.**

10. Ensure that land use regulations reflect the downtown planning policies.

11. Maintain the existing housing stock, and ensure that new housing has adequate septic capabilities.

12. The Town should grow around its historic personality, and must promote its historic areas as the "hub" of the downtown.

13. The primary purposes of the downtown are to be both functional and attractive within reasonable cost.

14. The development of the downtown should be geared toward serving town residents.

III. OBJECTIVES TO MEET ASHBURNHAM'S DOWNTOWN POLICIES

The major objectives to accomplish the policies laid out in the previous section fall into six categories: traffic; parking; pedestrians; land use; appearance; and process. The objectives are listed below under the category heading. The maps at the end of this section visually indicate where these objectives would take place in the downtown.

TRAFFIC

1. Prepare a downtown traffic plan.
2. Seek ways to decrease traffic flow through the Main Street/Central Street intersection.
3. Protect existing residential neighborhoods from inappropriate levels of traffic.
4. Investigate Maple Street as an access to the downtown.
5. Improve traffic in the Supermarket/Bank/Post office parking lot. Consider use of Memorial Drive as an outlet for all traffic for that area.
6. Consider reduction of curb cuts along Main Street.
7. Consider making Lawrence Avenue, Memorial Drive, and Town Hall Drive one way to reduce traffic returning to Main Street.
8. Review importance of maintaining Park Street as a public way.
9. If highway lot is developed, prepare plan for traffic movement between Central and Maple.
10. Discourage use of Puffer Street as a through road.
11. Slow traffic movement on Route 12.
12. Prepare plan for feasibility of Route 12 bypass.
13. Prepare a plan for street edge improvements along Route 12.

PARKING

1. Limit on-street parking to one side of the street in certain areas.
2. Identify off-street parking areas to compensate for the loss of on-street parking.
3. Study the parking situation at the Supermarket/Post Office/Bank parking area.
4. Assist the Police and Highway Departments in updating rules and regulations for parking in Ashburnham. Approve these regulations through required procedures. Provide adequate manpower and equipment to enforce regulations.
5. Adequately mark on-street parking spaces.
6. Require employees of businesses along Main Street to park in designated areas off Main Street.

PEDESTRIANS

1. In conjunction with any off-street parking areas that are developed, create a network of pedestrian walks that connects these areas to the downtown.
2. Ensure that heavily travelled roads such as Main Street and Central Street have adequate, continuous and well-maintained sidewalks on at least one side of the street. In addition, streets that have considerable pedestrian traffic such as School Street should have sidewalks.
3. Connect the Town buildings and common area with the rest of the downtown area and any future parking areas through pedestrian walks.
4. Make Main Street a pedestrian area rather than an auto-oriented area. Slow traffic along Main Street, and look for appropriate alternatives to the use of the Route 101/Route 12 intersection for thru traffic.

LAND USE

1. Relocate the Highway Department and Fire Station.
2. In conjunction with a study of all town-owned land, prepare a plan for use of the Highway Department land.
3. Work with Post office officials to keep the Post Office within the downtown business area.
4. Discuss the best use and location of buildings and parking areas in the entire Post office/Supermarket/Bank area. Work with the property and business owners of this area to develop any plans to change the area.
5. Promote the Town Common area as the center of the downtown area through landscaping, proper maintenance, development of additional community facilities and pedestrian walks.
6. Review land use regulations to ensure adequate dimensions, site plan review, parking/loading areas, and sign regulations for new businesses in downtown.
7. Relevant town officials should proceed with Update to 1976 Sanitary Facilities Study. The Downtown Planning Task Force should participate in committee that will oversee this project, and should incorporate information gained from Study Update in downtown planning efforts.
8. Prepare a plan for reuse of the old library.
9. Complete the historic district inventory and create an official district.
10. Study the possibilities for relocation of businesses within the downtown so as to aid both the businesses and the overall objectives of the downtown.

APPEARANCE

1. In conjunction with future discussions and work on the downtown, the Downtown Task Force must continue to identify particular characteristics of the downtown to be preserved. The extent and type of characteristics will determine the best way for the town to preserve these characteristics. For example, if small, unlighted signs are desirable, then the town must make sure that the zoning bylaw contains regulations to this effect. If the Task Force feels that the color and type of materials used is very important, then it would be necessary to create a Design District.
2. Newly-formed Merchants' Association and Downtown Task Force can work together to determine if merchants will support an application to the state Facade Improvement Program. This program requires matching funds from merchants for improvements to store fronts.
3. Put in new street lamps.
4. Bury telephone and electric lines.

PROCESS

1. A Downtown Task Force should be formed consisting of the following characteristics:
   a. Representatives of Cushing Academy; town officials from the Board of Selectmen, Planning Board, Police Dept., Economic Development Commission, Historical Commission; business owners from the Merchants' Association (see below); and interested citizens.
   b. There should be a minimum of 8 and not more than 15 members.
   c. The Task Force should be authorized by and report to the Board of Selectmen.
   d. All minutes of Task Force meetings will be public record. In addition, the Task Force should prepare quarterly reports to be submitted to the Board of Selectmen and published in the local paper.

2. A Merchants' Association should also be formed to function as a Chamber of Commerce for Ashburnham and to participate in the Downtown Task Force Association. Leaders from the business community should prepare an article for the town meeting warrant to fund the creation of this committee and to prepare bylaws for the Association.

IV. NEXT STEPS: PRIORITY OBJECTIVES TO IMPROVE ASHBURNHAM'S DOWNTOWN

Numerous factors were weighed in determining which of the projects identified in the Objectives section should take precedence. LandUse rated each of the objectives, using the criteria listed below.

Criteria for decision-making:

- Safety concerns
- Cost of project and type of funding- general fund, betterment district, state monies
- Type of project: Public vs. private vs. joint project
- Time frame for completion of task
- Public opinion importance
- Key to strengthening downtown economy
- Aesthetic concerns

Once each of the objectives was measured against these criteria, the following items emerged as very important issues for the Town to pursue. The following priority items are ranked in order of importance, with #1 the item that should receive top priority. The first three items seemed to be of equal importance, and all three objectives should be accomplished concurrently, if possible, and as soon as possible.

Priority Item #1A: Study the downtown traffic and parking patterns to identify critical safety issues and measures for immediate action.
Explanation: Use of existing businesses in the downtown is limited in large part by the poor traffic circulation around the major intersection in the downtown (Central St./Main St.) and the real lack of on- and off-street parking spaces. The town is unable to discuss or plan long-term goals for the downtown, particularly plans for business area expansion, without solving these serious problems related to existing use.
Immediate Action to be taken:

- Apply for Strategic planning grant funds to hire engineer to prepare specific traffic and parking design alternatives. Use Montachusett Regional Planning Commission (MRPC) Route 12 Traffic Study to aid in determining specific design alternatives. (Spring 1988)
- Once design alternatives are prepared, have public meetings to discuss alternative and determine appropriate choice for town. (Winter 1988)
- Implement chosen alternative. (Winter/Spring 1988)
- Review (MRPC) Route 12 Traffic Study, discuss recommendations made in this study, and take action to implement chosen recommendations. (Spring/Summer 1988)

Priority Item #1B: Work toward the creation of a Sewer or Community Septic system in the Downtown area.

Explanation: The septic and traffic/parking problems present the primary obstacles to doing long-range downtown planning in Ashburnham. Town officials are wary of opening up the downtown area (or its environs) to increased business or multifamily housing use when the septic system failure rate is presently so high. They are concerned, however, that multifamily housing is needed, and they feel that more business would be welcomed and supported by town residents. Therefore, these two major issues must be cleared up so that the town can proceed to make more concrete policy statements on future growth in the downtown.

Immediate Action to be Taken:

- Follow up on submission of Plan to Update Sanitary Facilities Study. Once Study has been approved, immediately take any action required to get going on the Study; form Waste Disposal Study Committee to work on the Study, and to work with the Downtown Planning Task Force in its efforts.
- Keep working on this issue until it has been effectively resolved - i.e., a system has been installed that meets Ashburnham's needs.

Priority Item #1C: Work with the U.S. Post Office officials to keep the Post Office within the downtown.

Explanation: There was a unanimous feeling from the Task Force, supported by comments made at the Public Workshop, that there would be a significant decrease in people coming to the downtown area if the Post Office moved from this area. People liked the convenience of doing their post office-related chores along with other necessary shopping. It is not a bad move for the Post Office to leave its present location, which is part of the reason for the existing traffic problems, but town officials would like to work with the Post Office to arrange a suitable location within the downtown district.

Immediate Action to be taken:

- Representative from Downtown Planning Task Force to continue to talk to Post Office about reconsidering its move. Arrange for letters of support for continued presence of Post Office in Downtown from Ashburnham Business Council, Cushing Academy, the Planning Board, Board of Selectmen and Downtown Planning Task Force. (May 1988)
- If possible, arrange for public meeting to be held between representatives of the Post Office, town officials, and interested citizens to discuss issue, and determine possible downtown location for Post Office. (May 1988)

Priority Item #2: Relocate the Highway Department. Prepare a plan to determine best use of the Highway Department lot.

Explanation: The Highway lot is one of the most underutilized pieces of property in the downtown. It is also one of the largest, basically undeveloped properties. What happens to this property, as well as other town-owned

properties in the downtown, will significantly affect the future course of the downtown.

Immediate Action to be taken:

- Identify an appropriate site for the location of the new Highway Dept. Location mentioned is the Old Dump site. This site seems to have the general approval of the Task Force and many town residents. Take action to move Highway Dept. to chosen location. (Summer/Fall 1988)
- In conjunction with the study and recommendations report on all town-owned properties in the downtown, determine the best use of this land. Consider not only its use under present conditions, but also if and when the traffic/parking and sewer problems have been resolved. Ensure that adequate testing has been done to determine extent, if any, of environmental concerns resulting from its use as a Highway Dept. lot. (1988)

Priority Item #3: Relocate the fire station.

Explanation: The fire station has a real space problem in its present location. There is no space for employee parking, and the station is located very close to the most dangerous and traffic-clogged intersection in town, that of Central St./Main St. The location severely inhibits good response time, and has an overall negative effective on the department's performance. The Fire Chief is completely supportive of moving the station, and has already identified a suitable location, owned by the Town. In addition, preliminary talks with the Task Force have identified the possibility of this land being used, along with other parcels, to develop off-street parking.

Immediate Action to be Taken:

- Confirm new location of fire station. Prepare and present budget item to move fire station. (1988/1989)
- In conjunction with a study and recommendations report on all town-owned properties in the downtown, determine the best use of this land. Consider not only its use under present conditions, but also if and when the traffic/parking and sewer problems have been resolved. (1988)

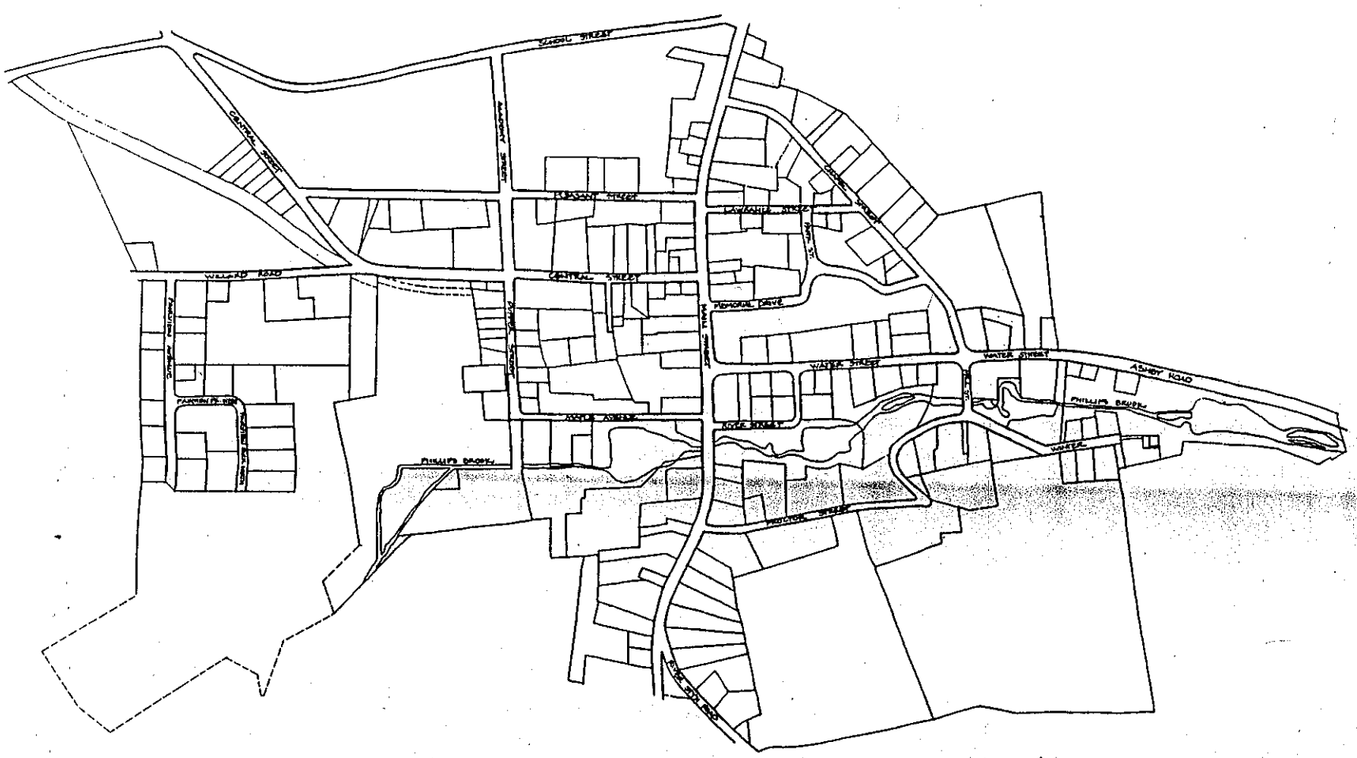
Priority Item #4: Work with the owners of the Supermarket/ Bank/Post Office/Insurance Company block to study use of this area.

Explanation: The traffic patterns in this block of buildings have a significant effect on traffic and parking patterns in the downtown area, particularly at the crucial Route 12/101 intersection. In addition, the three establishments mentioned - the Bank, Post Office, and Supermarket -- are preparing to make changes in their use and/or location. Given the significant effect that use of this block has on the downtown, it would be helpful for the Downtown Planning Task Force to be apprised of their plans. In this way, the Task Force can provide input as possible to encourage changes that will have a positive impact on the downtown as a whole.

Immediate Action to be taken:

- Ensure that these businesses are represented on the Downtown Planning Task Force. In the event that this is not possible, provide for continued discussions with between a representative of the Downtown Planning Task Force and the business(es) not represented. (May 1988)
- As schematic plans are drawn up for traffic and parking improvements, seek approval and participation of these businesses in including their block in the overall design concepts. (1988/1989)

The emphasis on the above items does not diminish the importance of the objectives not mentioned above. To a great extent, many of the other recommendations hinge on successful accomplishment of the above priority items. The ability to carry out any of the work listed above is contingent upon the formal organization of a Downtown Task Force, and the continued participation of everyone affected by decisions made in that group, particularly town officials and business people. The communication that has made this project a successful one is a necessary ingredient for continued success in downtown planning.



ASHBURNHAM, MA

DOWNTOWN STUDY

Land Use, Inc. 1988

BUSINESS

RESIDENTIAL

CUSHING ACADEMY

LARGE OPEN PARCELS

TOWN LAND

CURRENT LAND USE

DOWNTOWN STUDY

ASHBURNHAM, MA

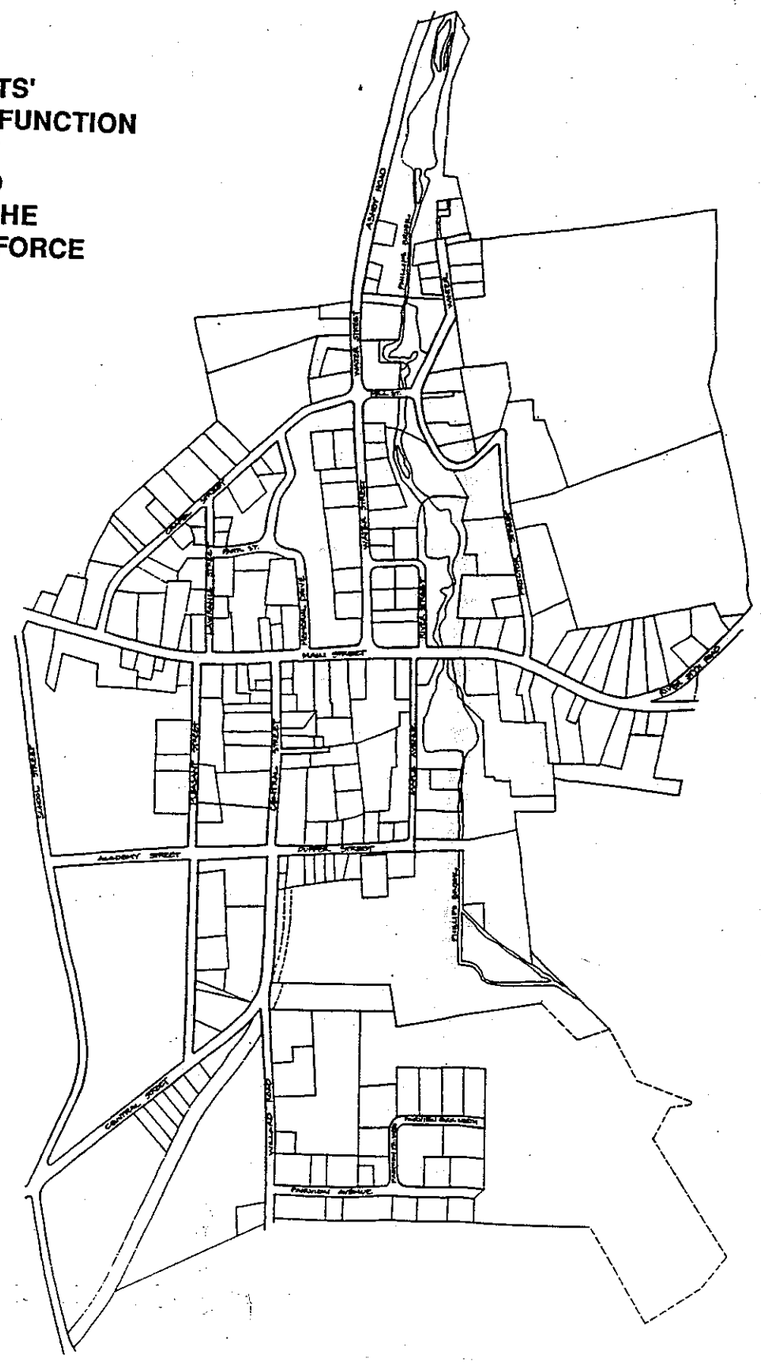
Land Use, Inc. 1988

PROCESS

DOWNTOWN STUDY

ASHBURNHAM, MA

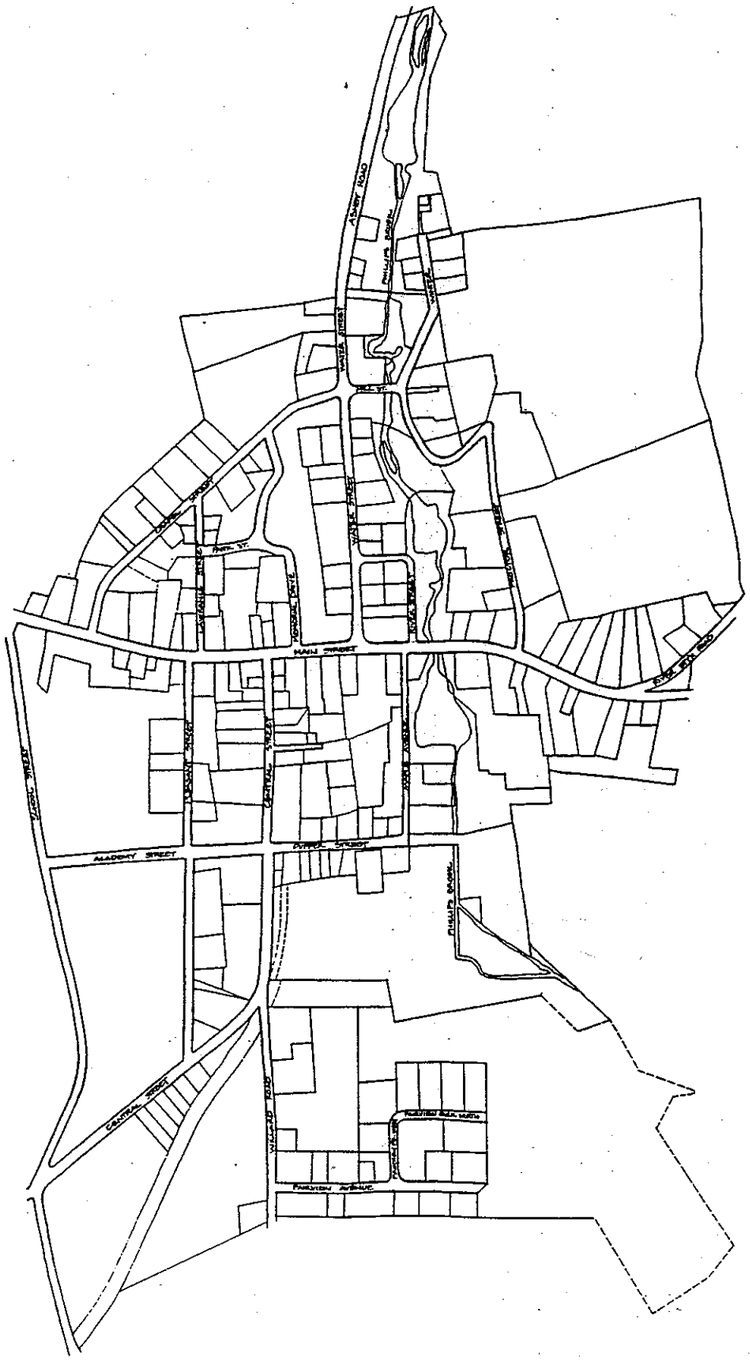
- FORM A MERCHANTS' ASSOCIATION TO FUNCTION AS A CHAMBER OF COMMERCE AND TO PARTICIPATE IN THE DOWNTOWN TASK FORCE ASSOCIATION



- FORM A DOWNTOWN TASK FORCE COMPOSED OF REPRESENTATIVES OF CUSHING ACADEMY; TOWN OFFICIALS FROM THE BOARD OF SELECTMEN, PLANNING BOARD, POLICE DEPARTMENT, ECONOMIC DEVELOPMENT COMMISSON, HISTORIC COMMISSION, BUSINESS OWNERS FROM THE MERCHANTS' ASSOCIATION; AND INTERESTED CITIZENS

- CONTINUE TO IDENTIFY PARTICULAR CHARACTERISTICS OF DOWNTOWN TO BE PRESERVED

- DETERMINE IF MERCHANTS WILL SUPPORT AN APPLICATION TO THE STATE FACADE IMPROVEMENT PROGRAM



- BURY TELEPHONE AND ELECTRIC LINES

- INSTALL NEW STREET LAMPS

APPEARANCE

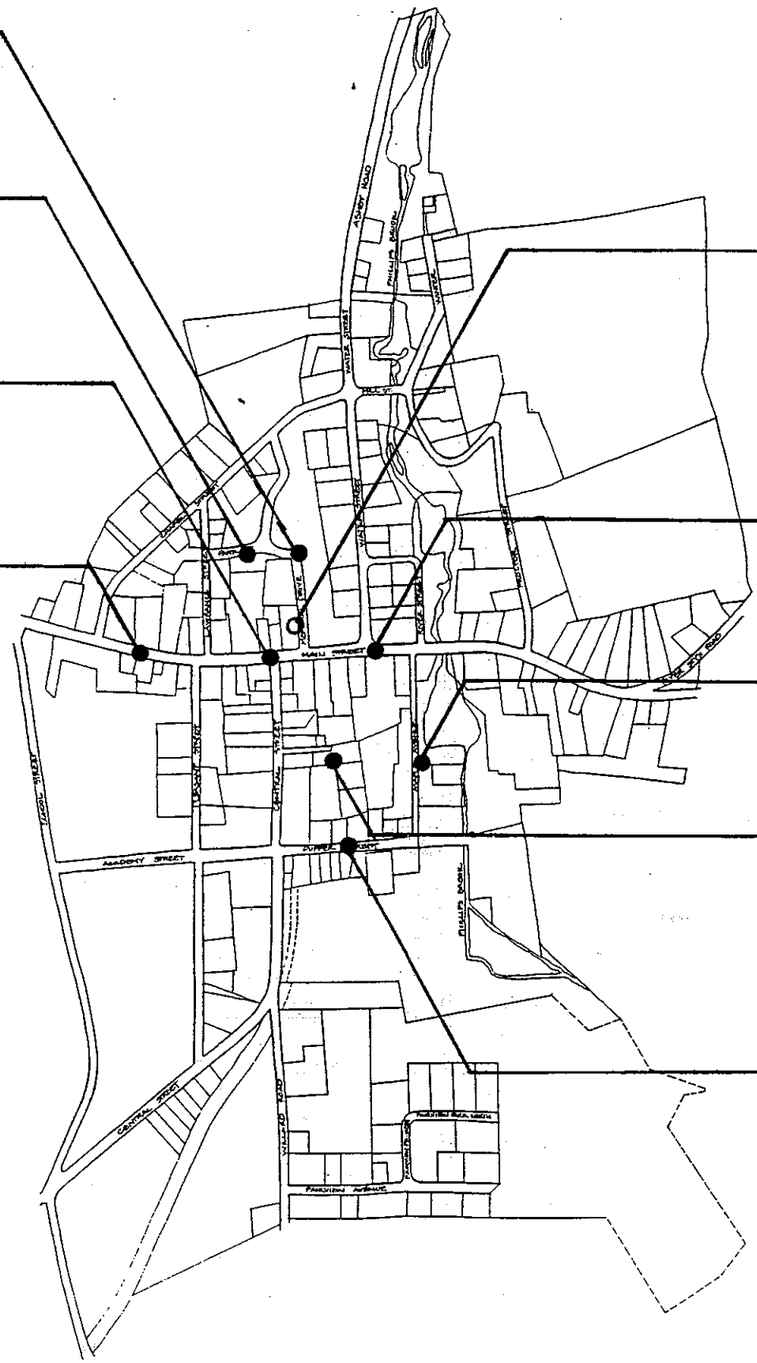
0 200 400 800

DOWNTOWN STUDY

ASHBURNHAM, MA

Land Use Inc. 1988

- MAKE LAWRENCE AVE. MEMORIAL DR. AND TOWN HALL DR. ONE WAY TO REDUCE TRAFFIC
- SHOULD PARK STREET BE A PUBLIC WAY?
- DECREASE TRAFFIC AT MAIN ST./ CENTRAL ST. INTERSECTION
- SLOW TRAFFIC ON RT. 12
- PREPARE PLAN FOR STREET EDGE IMPROVEMENTS ALONG RT. 12
- PREPARE PLAN FOR FEASIBILITY OF RT. 12 BYPASS
- PREPARE A DOWNTOWN PLAN



- PROTECT EXISTING RESIDENTIAL NEIGHBORHOODS FROM TRAFFIC
- IMPROVE TRAFFIC IN SUPERMARKET/ BANK/ POST OFFICE PARKING LOT USE MEMORIAL DR. AS AN OUTLET
- REDUCE CURB CUTS ALONG MAIN STREET
- USE MAPLE ST. AS DOWNTOWN ACCESS
- PLAN FOR TRAFFIC MOVEMENT BETWEEN CENTRAL ST. AND MAPLE AVE.
- DISCOURAGE USE OF PUFFER ST. AS THROUGH ROAD

TRAFFIC

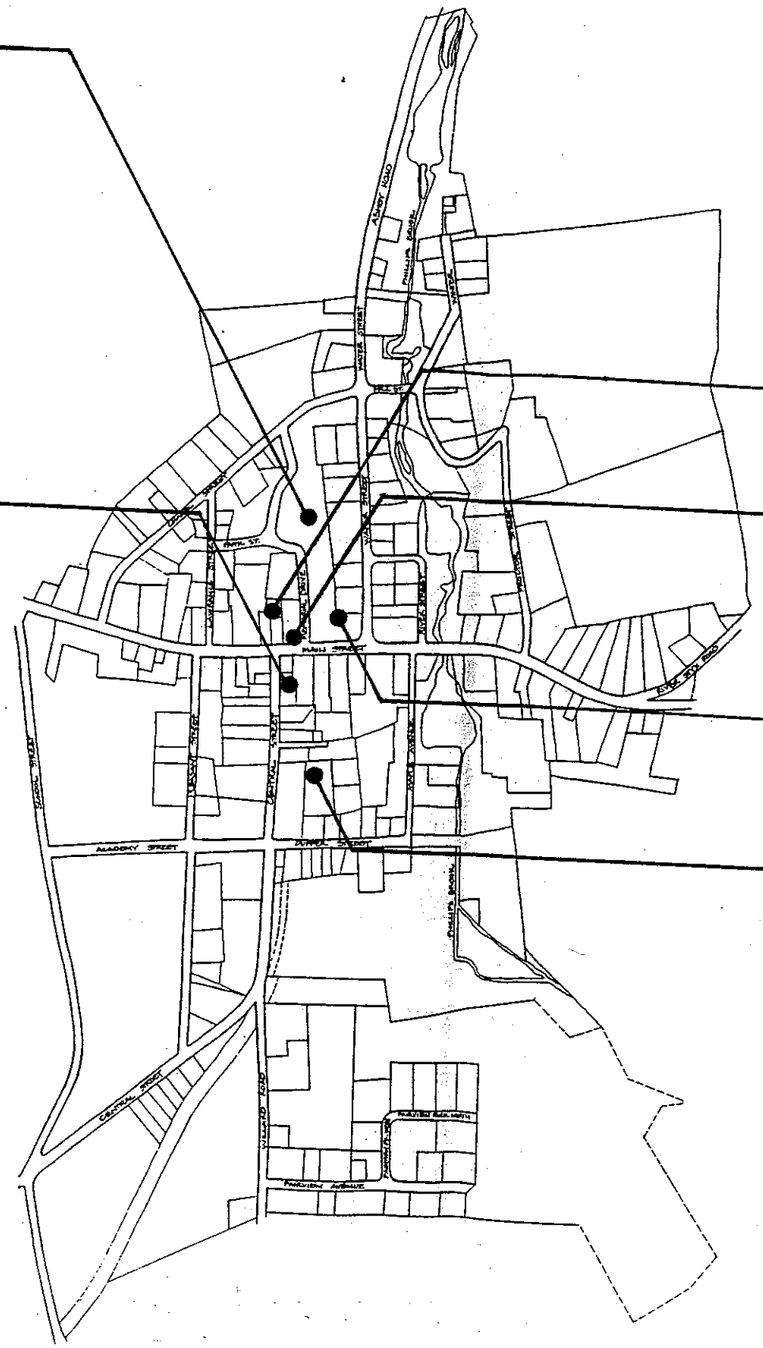
0 200 400 800

DOWNTOWN STUDY

ASHBURNHAM, MA

Land Use

- PROMOTE TOWN COMMON AREA AS CENTER OF DOWNTOWN THROUGH LANDSCAPING, PROPER MAINTENANCE, DEVELOPMENT OF COMMUNITY FACILITIES AND PEDESTRIAN WALKS
- RELOCATE FIRE STATION
- REVIEW LAND USE REGULATIONS TO INSURE ADEQUATE DIMENSIONS, SITE PLAN REVIEW, PARKING/LOADING AREAS AND SIGN REGULATIONS
- DISCUSS INSTALLATION OF COMMUNITY SEWER OR SEPTIC SYSTEM IN CONJUNCTION WITH A TOWN WIDE WASTE DISPOSAL PLAN



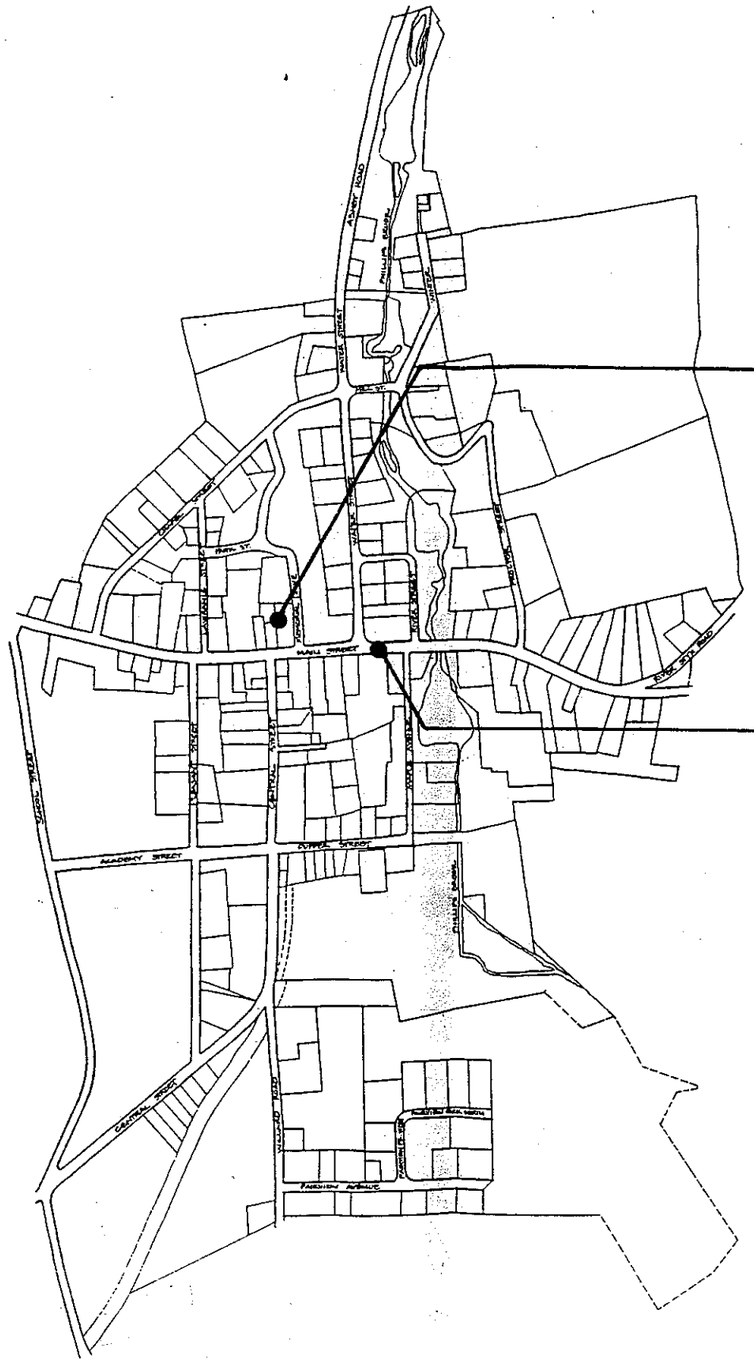
- COMPLETE HISTORIC DISTRICT INVENTORY AND CREATE AN OFFICIAL DISTIRCT
- STUDY ENTIRE BANK/ SUPERMARKET/ POST OFFICE AREA
- KEEP POST OFFICE WITHIN DOWNTOWN AREA
- PREPARE PLAN FOR REUSE OF LIBRARY
- RELOCATE HIGHWAY DEPARTMENT AND PLAN FOR USE OF ITS LAND
- STUDY THE POSSIBILITY OF RELOCATON OF BUSINESSES

LAND USE

DOWNTOWN STUDY

ASHBURNHAM, MA

- ONE-SIDE, ON-STREET PARKING IN CERTAIN AREAS
- IDENTIFY OFF-STREET PARKING AREAS TO COMPENSATE FOR LOSS OF ON-STREET PARKING SPACES AND LACK OF OFF-STREET PARKING AREAS
- ASSIST POLICE AND HIGHWAY DEPARTMENTS IN UPDATING RULES AND REGULATIONS FOR PARKING



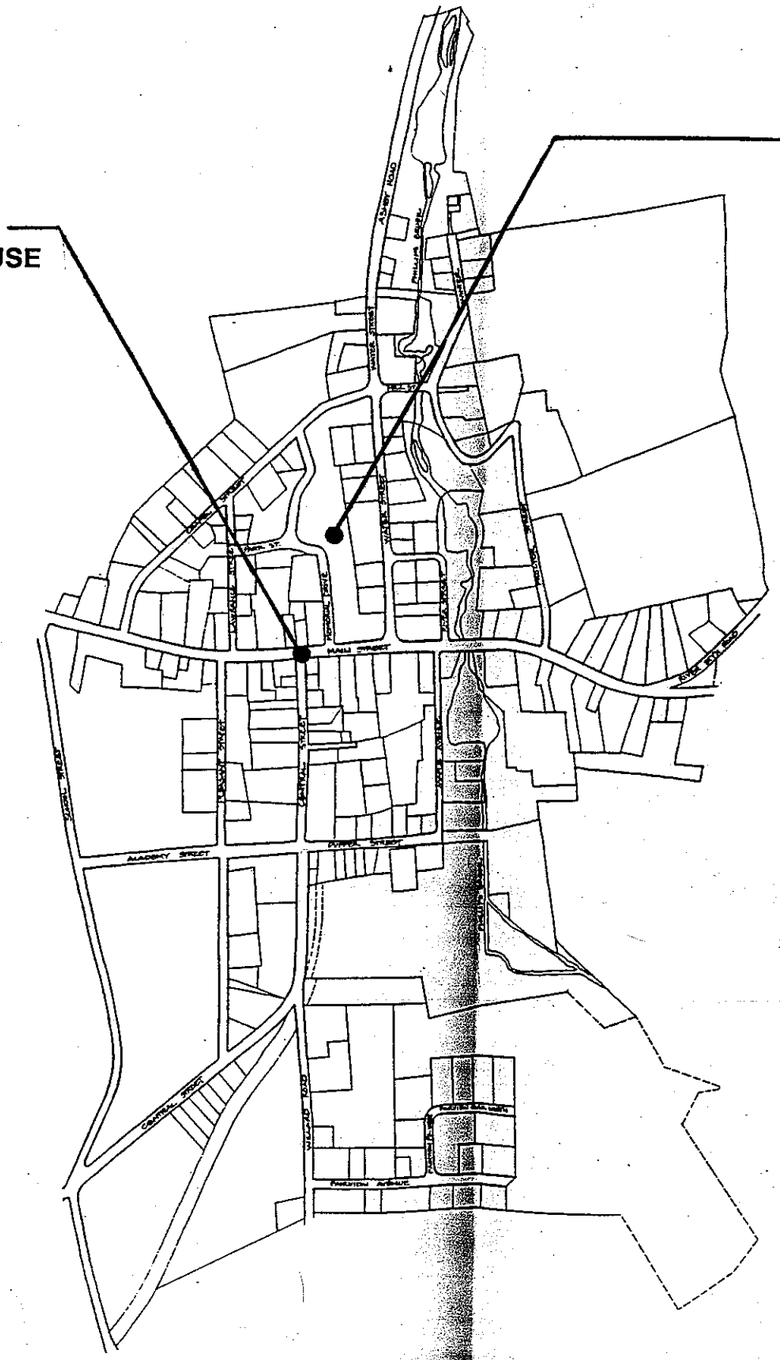
- STUDY PARKING SITUATION AT SUPERMARKET/ BANK/ POST OFFICE PARKING AREA
- PROVIDE EMPLOYEE PARKING OFF MAIN STREET
- ADEQUATELY MARK ON-STREET PARKING SPACES

PARKING

ASHBURNHAM, MA

PEDESTRIAN

- LOOK FOR APPROPRIATE ALTERNATIVES TO THE USE OF RT. 101 / RT. 12 INTERSECTION FOR THROUGH TRAFFIC
- CONNECT TOWN BUILDINGS AND COMMON WITH REST OF DOWN TOWN AREA THROUGH PEDESTRIAN WALKS
- ENSURE ADEQUATE, CONTINUOUS, WELL-MAINTAINED SIDEWALKS ON AT LEAST ONE SIDE OF MAIN, CENTRAL AND OTHER STREETS AS NECESSARY
- CREATE A NETWORK OF PEDESTRIAN WALKS



DOWNTOWN STUDY

ASHBURNHAM, MA

Land Use, Inc. 1988